

A STUDY IN PUBLIC FINANCE



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A STUDY IN PUBLIC FINANCE

BY

A. C. PIGOU, M.A.

PROFESSOR OF POLITICAL ECONOMY IN THE UNIVERSITY OF CAMBRIDGE

AUTHOR OF

"THE ECONOMICS OF WELFARE", "INDUSTRIAL FLUCTUATIONS", ETC.

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PREFACE TO THE FIRST EDITION

I HAVE called this volume *A Study in Public Finance* and not *Public Finance*, so as to indicate that not all of the ground customarily covered by treatises with the wider title is brought under review. The volume is designed to supplement my two other volumes, *The Economics of Welfare* and *Industrial Fluctuations*, the three books together embodying the main part of what I have to say on general economics.— In Parts I. and III. I have made considerable use of material taken from my *Political Economy of War*, now out of print, and from Part IV. of the first edition of *The Economics of Welfare*, most of which was omitted from the later editions. This material has, of course, been revised and reconsidered. Part II., on Revenue from Taxation, with the exception of Chapters XIV. and XVI., is, in the main, new. My thanks are due to Mr. D. H. Robertson of Trinity College and Mr. F. Ramsey of King's College, who have very kindly read portions of my manuscript and made valuable suggestions.

A. C. P.

September 1927.

PREFACE TO THE SECOND EDITION

IN this edition I have corrected a few errors, but have attempted no substantial revision. For the term *exhaustive* expenditure, which has led to some misunderstandings, I have substituted *real* expenditure, and have endeavoured, in Part I., Chapter III., to make the meaning assigned to the term clear.

A. C. P.

June 1929.

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PART I

GENERAL RELATIONS

CHAPTER I

PRELIMINARY

§ 1. IN every developed society there is some form of government organisation, which may or may not represent the members of the society collectively, but certainly has coercive authority over them individually. As a rule the government organisation is broken up into a central government with large powers and a number of local government authorities with limited powers. The governing authority, whether central or local, is endowed with functions and duties, the detailed nature of which varies in different places. These duties involve the expenditure and, consequently, require also the raising of revenue.

§ 2. In modern conditions these processes are operated almost exclusively through the medium of money. It is true that on occasions governments make a levy of resources, of which they have need, in kind. Thus, in most European countries, even in peace time, the services of soldiers are obtained by conscription; and it has happened that civilian labour (*e.g.* in Bulgaria) has been called up in the same way. In war time commandeering is apt to be extended over a much wider range. Buildings, motor-cars, horses, stocks of food and so on may be forcibly taken over. During the later years of the Great War the British Government commandeered the whole of the wool crop and the whole of the wheat crop of the country. Resort to methods of this kind is not, however, really alternative to the use of money. Conscripted soldiers are paid money wages and the owners of commandeered goods usually receive money compensation. What happens is not an abandonment of the money instru-

ment, but a supplementing of it by compulsion on the public to sell and authoritative fixing of the price at which sales are to be made. Thus we may lay it down, as a practically universal rule for modern countries, that the spending and the raising of resources by government authorities are always manifested in the form of spending and raising money.

§ 3. Though money is thus the universal *medium* of public finance, it is not, of course, the thing in which it really deals. The money is merely a ticket embodying command over actual services and goods. It is these, and not the money that represents them, which constitute the real object of all transactions. This is, of course, a truism. Adam Smith set it out once and for all 150 years ago when he wrote: "It would be too ridiculous to go about seriously to prove that wealth does not consist in money or in gold or silver, but in what money purchases and is of value only for purchasing". Nobody now would deny this thesis directly. But, while the statement that money is merely the form of public finance, and goods and services the substance, is now, in a sense, a platitude, it is a platitude the detailed implications of which are complex. Every completed act of public finance is alike in form. £100 million are obtained by the government from the public—for the present we leave out of consideration the creation of new money—and are paid over to certain other persons. This money is purchasing power. When it is taken away, those persons from whom it is taken are constrained to give up certain things (including perhaps some leisure) which they would have had if it had not been taken away. The government then spends the £100 million. It is evident that there are a great number of different ways in which the providers of taxes or fees or loans can modify their purchases and activity in order to furnish the £100 million: and a great number of different ways in which the £100 million can be spent, and in which the output of different sorts of things and services can accordingly be affected. For any real understanding of public finance, it is necessary to examine very carefully the divergences of substance that underlie similarities in money form. ,

CHAPTER II

PRINCIPLES OF COMPENSATION

§ 1. IN the second section of the preceding chapter it was shown that, though practically always, when a government authority assumes possession of a thing or service, it makes in return a payment of money, this circumstance is not incompatible with commandeering, in the sense of compulsion upon owners to sell at a price not fixed by them. It is, indeed, only rarely that there is need for this. The quantity of any particular sort of thing or service that a government requires is as a rule fairly small compared with the producing power of the country in respect of that sort of thing or service; and, therefore, if there is no great urgency, its demand can be satisfied at a price which does not yield any abnormal profit to anybody. There would be no point, for instance, in a government's commandeering the motor lorries or the clerical labour that it needs in the ordinary course, because it could not well pay less for the commandeered things than the market price, and, for the market price, it could get them without commandeering. There are, however, two cases to which these considerations do not apply. The first is that of unique key things that cannot be reproduced in the market; the second that of very large government demands occurring so suddenly that new production cannot satisfy them and resort must be had also to things already in consumers' hands.

§ 2. An imaginary instance of an unique thing, not susceptible of reproduction, desired by a government would be furnished if it were decided to develop a national collection of works of art or of historic buildings, and particular works

or buildings in private hands were needed for this collection. Actual instances are also easily found. Thus, a government decides to nationalise, either permanently or temporarily, the railway system or the telephones, and, to this end, needs to buy out, or to obtain a lease from, existing owners of these things. Here it is confronted with a seller possessing monopoly power, and, unless it can override him by law, may be forced to pay a sum that will yield him a much larger income than he has been deriving, or has hoped to derive, from his property, so that he, in effect, levies a ransom on the public. Again, a government, in order to facilitate the building of a railway or the establishment of small holdings or some other social end, has need of certain *particular pieces* of land. Once more it is confronted by monopoly, and, unless it can exercise legal compulsion, is liable either to have a socially useful enterprise estopped or to be mulcted of outrageous sums. In such conditions compulsory purchase at an officially fixed price is the obvious and only solution. Closely similar considerations arise if a government decides to nationalise permanently or temporarily *all* property rights in coal mines or land rents or mining royalties. Here we are not, indeed, dealing with unique things in the hands of a single monopolistic seller, but with a number of things in many hands. But, since the government needs *all* of them, it is not in a position to bargain in the market, and some of the sellers, unless there is compulsion, may, therefore, be expected to stand out successfully, just as a monopolist might do, for an unreasonable price.

§ 3. Sudden and very large demands on the part of governments, exceeding present capacity for new production, are only likely to occur in time of war. Horses, motor-cars, stocks of certain sorts of food, or particular classes of foreign securities, may be needed in the largest procurable quantities all at once. So may, for a time, the services of railways and of ships and of particular buildings. To offer the market price, or even something a good deal better, would not call out *at once* offers to sell from *all* even of those persons who might be expected to make offers eventually; and some owners

would not sell at all for any reasonable price. In essence there is not very much difference between this situation and that discussed in the preceding section. Once more potential sellers of what the government needs are in an exceptionally strong position, and could, in the absence of compulsion, extort terms and cause delay highly injurious to the public interest.

§ 4. We have then, in the various conditions contemplated above, to consider on what principles the amount, if any, of the purchase price, or compensation money, paid for things and services purchased compulsorily may properly be determined. On this matter there are large differences of opinion, and several distinctions will need to be drawn. One general observation should, however, be made first. There is a widespread tendency to describe failure to compensate for the withdrawal of particular property rights in terms, such as robbery, that imply that something *illegal* is being done. But property rights are the child of law, which is itself the creation of the public political authority. It is evident, therefore, that, except where there is an overriding written constitution, there can be no question of *illegality*, whatever a sovereign public authority may choose to do in respect of property rights hitherto enjoyed by its citizens. A statute passed in due form by the British Parliament taking away all property rights, or some particular property right, from all red-haired men, or from some particular red-haired man, might be objectionable, but could not possibly be illegal. The use of such a term as robbery, therefore, when applied to acts of sovereign public authorities, is inappropriate. That term signifies the taking away by force or fraud of something to which the robbed person has a legal right. When a public authority acts in due form it never does this: it withdraws a right which it has itself created; and, from the point of view of legality, nobody can have any ground of complaint. The expropriation by a private person of something to which another private person has a legal right and the withdrawal by the public authority of that legal right are acts of entirely different kinds. Any use of words that tends to confuse them should be avoided.

§ 5. Fundamental to the problem of compensation is the principle of equity. This principle in its barest form asserts that *similar persons should be treated similarly*—by the public powers as by anybody else. Sidgwick held that knowledge of it is given in direct intuition. This view implies that, if there is a given aggregate of private good—not of good things—available for distribution among two or more exactly similar men, a further element of public good is created when this private good is divided among them equally. Now, it is held by certain ethical philosophers that the only elements of good are states of consciousness. If this is so, equity, which is a relation between states of consciousness, clearly cannot be an element of good, or, apart from its effects, have any ethical value. The issue thus raised is an important one. For our present purpose, however, it is not necessary to enlarge upon it. For, even if Sidgwick's view that equity is itself a good be rejected, there are available other considerations adequate to establish the principle of equity in its economic applications. First, if £1000 have to be taken from two people of equal wealth and similar temperament, the law of diminishing utility shows that less hurt will be caused by taking it in equal parts from each of them than by taking it in any other proportion. Secondly, if it is taken in any other proportion, a sense of being unfairly treated will be created in the person who pays the larger amount; and this is in itself an evil. Thirdly, unequal treatment of different people, where no good cause can be shown for it, breeds a sense of insecurity all round; for everyone feels that he may be the next victim. This discourages people from working and saving to obtain possession of durable things, and so indirectly strikes a blow at the accumulation of capital much heavier than would be struck by the collection of an equal sum of money on some intelligible non-arbitrary plan. It will be generally agreed that these considerations taken together establish the principle of equity, for the purpose of the present inquiry, on a firm basis.

§ 6. Unfortunately, however, the principle in its barest form, as sketched above, cannot be applied to practice, because in real life no two persons ever are exactly similar.

Hence the principle must be expanded, so that it declares : “ different persons should be treated similarly unless they are dissimilar in some *relevant* respect ”. In the abstract nobody is likely to quarrel with this. But the importation of relevance, none the less, raises difficult issues : for we have to decide what dissimilarities are, and what are not, relevant. In the last resort this can only be done by direct judgement applied to the detailed circumstances of particular cases. But the task of direct judgement can be made easier by a preliminary survey of a more general kind. To this end it is convenient to distinguish between the commandeering of a few individual items within a class of similar things and the commandeering of the whole of a class of things—under which latter head will be included the commandeering of a single thing if it is the sole member of a class. I shall consider first the commandeering of particular items within a class, and shall begin with commandeering which takes place at a time when general conditions are stable.

§ 7. In stable conditions the notion of membership of a class presents no serious difficulty. It may, no doubt, be pointed out, for example, that there are a number of different types of motor-car ; and it may be asked whether a particular car is to be regarded as a member of the class “ cars in general ” or of the class “ cars of its own type ”. But, since general conditions are supposed to be stable, so that the relations between the owners of different types of car are constant, it does not matter whether this question is answered in the one way or in the other ; and there is no need to cavil at any classification with which common sense and general usage present us. Without, therefore, pressing this matter further, we may proceed to illustrate the sort of commandeering that has now to be studied. Examples are afforded by the expropriation of particular pieces of land which happen to lie on the road of a proposed railway, or which are specially fitted for small holdings (whether they are taken over completely by the public authority or are subjected to compulsory leasing) ; or of particular horses or stores of hay, or of particular buildings that happen to be suitable for billeting troops. The principle of equity clearly

requires that the owners of those particular items should not be hit harder by government action than similar owners of other similar items. They should be paid such amount of compensation as is required to prevent this.

§ 8. It may perhaps be suggested that this way of looking at the matter is too simple, and that true equity requires us to take into account the wealth and family estate and, perhaps, the age of the several persons affected. This, however, is not so. These things are, indeed, highly relevant to the amount of taxation that the several owners should be made to bear. They are also relevant when what is contemplated is a compassionate allowance to deal, of grace, with hard cases to which the principle of compensation is held to be inapplicable. But they are not relevant to the question whether, in fact, that principle is applicable, whether, for instance, compensation should be paid for the commandeering of certain people's motor-cars or land. It would be "unfair" to pay such compensation to married men but not to bachelors, or to poor men but not to rich men; for, as we must presume, differences in these respects have already been taken into account in the assessment of general taxation. To regulate compensation payments in the light of them would be to count the same thing twice over—to punish a man a second time for one offence. In like manner, when we have to do with the expropriation of particular items of property within a general class, considerations connected with the character of that class as a whole are not relevant. If it is held that the class is one on which special burdens ought to be assessed, this should be done by taxes affecting the whole class, not by arbitrary blows at particular items within the class. When particular items are expropriated, it may, indeed, be held, on grounds connected with the nature of the class, *e.g.* liquor licences, that no compensation should be paid out of *general funds*. This is, however, in no way incompatible with the payment of compensation to the owners of the particular items; for this can be done out of funds raised from the owners of all the items in the class affected, including the owners of the expropriated items.

§ 9. There still, however, remains a difficulty. The principle of compensation—for the kind of case contemplated so far—is established, but the amount of compensation that will put a man whose field or motor-car has been commandeered in the same position as one whose similar field or car has not been commandeered is not yet defined. If the thing commandeered were seven sacks of No. 1 red winter wheat, the payment required would obviously be the market value of this number of sacks; for that payment would enable the expropriated proprietor to replace exactly what had been taken from him, so that, except for his share in the taxes needed to provide the compensation money, in respect of which he stands on the same footing as everybody else, he would not be affected at all. But a particular piece of land or a house, or possibly even a motor-car, may have a special value to the owner greater than its market value. To part with it may involve a loss to him of what he values at £10,000, though the market only values it at £2000. In these circumstances what value ought to be taken as the basis of compensation? The principle of equity suggests: the monetary representative of the special value of the property right to its owner. For, if the market value is taken, he is really hit harder than other people because he happens to own this particular piece of property. This conclusion must, however, be qualified before it can be applied to practice. When the particular piece of land or house has a special value to its owner because, when associated with him, it carries goodwill—e.g. a shop in the place where the owner is known—this goodwill can, without great difficulty, be valued and reckoned in the compensation money. But, when it has a special value due to sentiment and so on, no such objective valuation is feasible, and account cannot, therefore, be taken of it. We must content ourselves with such rough justice as is afforded by the payment of something, say 10 per cent, in excess of market value as compensation for disturbance.

§ 10. When general conditions are no longer supposed to be stable, more awkward issues have to be faced. Let us suppose that we are dealing with something to which the difficulty discussed in the preceding section does not apply,

so that in normal times market value—a perfectly definite thing—would be proper compensation to an expropriated person. In normal times this market value would correspond roughly to cost of production, and the payment of it would, therefore, maintain the expropriated person's position at once as against other persons with similar bits of property, as against other persons with dissimilar bits of property, and as against himself previously. In times of disturbance, however, this is no longer true. There are three things for equity to choose from : equivalence to other owners of similar property, equivalence to other owners of dissimilar property, and equivalence to the expropriated person's self in the past. An illustration of the difficulty is afforded by the action of the British Government in commandeering some ships, but not all ships, from private owners during the Great War. The owners of non-commandeered ships were making enormous profits, as compared both with themselves previously and with the owners of most other sorts of property. Would it have been proper to compensate the owners of commandeered ships upon terms that enabled them also to do this ? The government in fact paid pre-war Blue Book rates, which were designed to put the commandeered owners into their pre-war position, but which, in fact, since no allowance was made for the fall in the purchasing power of money, put them in a rather worse position than this. To the plain man—apart from the failure to take account of the change in the value of money—this arrangement would probably commend itself as fair. Why, he would ask, should a particular ship-owner be compensated for not being allowed to get an unexpected and unworked-for windfall, merely because another ship-owner has had that piece of fortune ? If, however, instead of a boom, there had been a great slump in the value of ships, the plain man would not have thought it reasonable for the government to pay for commandeered ships at pre-war rates, which then would have stood much above the rates currently received by other ship-owners. And yet the principle is exactly the same ! The plain man's thought seems in fact to be : arrange your compensation terms in

times of disturbance in such wise that the owner of commandeered goods is prevented from enjoying windfalls that he would have got apart from the commandeering, but is not saved from suffering anti-windfalls which he would have suffered apart from it. This view lacks logical symmetry; but it is, none the less, the one which most students—the present writer among them—will be inclined to adopt.

§ 11. There remains for consideration one peculiar case also associated with times of disturbance. Suppose that an insurrection breaks out in a particular part of the country, and that, in order to deal with it, the government has to commandeer motor-cars and houses there; or, more strongly still, that it has to do this because the district has been invaded by a foreign enemy. This commandeering is merely an incident in a larger whole; and the question whether compensation should be paid for it must turn on whether or not compensation is being paid for the damage that the insurrection or invasion has inflicted on other property owners in the district. If the government is unable or unwilling to make good that damage, it would be unreasonable to expect it to make good the damage caused by its own commandeering. The same class of consideration applies to commandeering, e.g. of surviving houses, required to meet the distress caused by an earthquake in a town where most of the houses have been destroyed. Apart from these special cases we may lay it down that, for the expropriation of particular items within a general class, compensation should always be paid in such wise that the owners of the expropriated items are not subject to damage through expropriation from which the owners of other items in the class are exempted.

§ 12. We now turn to the problem of compensation in its application to classes of items instead of to particular items within a class. This problem in one aspect is equivalent to the problem whether, or in what circumstances, the compensation to be paid to an expropriated individual inside a class should be provided by taxes confined to members of that class, as against taxes spread over the whole community. Under the latter plan the class, some of whose members have

been expropriated, is compensated for the damage thus done to the class as a whole : under the former plan it is not. An instance of the latter plan is afforded by the arrangements in connection with the commandeering of ships that have just been discussed : an instance of the former by Mr. (now Earl) Balfour's Liquor Licences Act, in which a compensation fund for expropriated licensees was obtained by a levy on licensees who were not expropriated. We have to consider in what conditions the one, and in what the other, of these rival policies is called for.

§ 13. First, in so far as the act of expropriation of particular items within a class either itself causes, or is bound up with a policy that causes, an increase in the value of other items within that class, there is a clear case for levying the compensation money from the owners of those benefited items. Thus, if the State commandeers a piece of land to enable a tramway to be built to the outskirts of a town, with the result that the surrounding land is made more valuable, the owners of this surrounding land ought plainly to pay. The same argument holds if neighbouring licensed houses are benefited by the compulsory closing down of rivals. This is the principle of betterment. In the abstract its equity is beyond debate. We may, however, be debarred from applying it in practice by inability to determine with any exactitude *who* have enjoyed the betterment and *how much* betterment they have enjoyed.

§ 14. Secondly, when a class, some among whose members are being expropriated, is enjoying as a whole exceptional good fortune, there is much to be said for taking the compensation money from the class, even though its good fortune is not due to the expropriation policy. Thus it would seem that the money to pay for commandeered ships during the war might well have been obtained by a special levy on ships that were not commandeered. An arrangement of this kind, if it could be worked in practice, would almost certainly commend itself to the plain man's sense of equity ; the commandeering of some ships at pre-war rates being regarded as a partial set-off to a windfall to ship-owners as a class, which, even so, would have remained very large.

§ 15. Apart from these special cases there is not in principle any reason for throwing the burden of compensating particular expropriated members within a class upon the members of that class, except when it can be shown that the class as a whole ought to be subjected to a burden larger than it is at the time bearing under the existing system of national and local taxes. This issue is most conveniently discussed in connection with the expropriation of classes as wholes—whether classes of one member or of many members;—with the expropriation, for example, of private railway companies, telephone companies, royalty owners, land-owners in general, slave-owners, owners of feudal rights, owners of rotten boroughs, and so on. We need not consider again here the difficulties that arise in periods of disturbance or those connected with the fact that certain things have a special value to their present owners. Apart from these difficulties we have to ask: Ought compensation to be paid in any or all of the above cases in such wise as to put the owners of the expropriated class of things in the same position as other owners, or are there relevant peculiarities about the expropriated class that warrant a refusal to pay full compensation, or even to pay any compensation at all?

§ 16. Certain property rights have a defective legal status. Thus the holders of licences for the sale of alcoholic drinks have no legal title to a renewal of their licences, so that to refuse to renew is not to remove any legal right. On this ground it may be argued that here there is no case for compensation. Against this I answer that reasonable expectation is a more fundamental thing than legal right. Thus, if from the beginning of the world every licence had always been renewed, the absence of legal right would clearly be a mere technicality. It does not, of course, follow that the compensation paid should be equal to what it would have been if there had been a legal right; for generally, if there is only custom, the reasonable expectation of renewal will be *pro tanto* less. This, however, will be reflected in the market value of the "right"; and, apart from the considerations to be set out in § 18, compensation up to this value will, therefore, be proper.

§ 17. Arguments for refusing compensation are sometimes based on the manner in which certain rights have originated. Such arguments have been used in regard to the proposed nationalisation of land and of mineral royalties. These things, it is said, ought never to have become subject to private property rights. Whereas other property is the fruit of man's labour and waiting, mineral deposits and land are a free gift. Therefore, so runs the argument, they may properly be expropriated without compensation; they should be put back into the same legal position that unfound gold and silver in this country hold. Now, the question whether land and mineral deposits ought to have been allowed to come into private hands is much disputed. But in fact they have so come, and their present owners have bought or inherited them in exactly the same way as other people have bought or inherited other sorts of property. To expropriate them without compensation and not so to expropriate other sorts would involve grave inequities. For suppose that, shortly before the new law was passed, one man A had exchanged with another man B £100,000 worth of land against £100,000 worth of War Loan. Expropriation of land alone would leave A untouched, while taking the whole fortune of B; though, until a moment previously, A was, and B was not, an owner of land. The unfairness is gross and palpable. The argument for compensation implied in it derives its main force, of course, from the circumstance that land is a marketable commodity. The mere fact that a man has enjoyed an unwarranted right in the past is not, if his right is inherently indefensible, a good ground for continuing it. But things that have lasted a long time are in actual life frequently transferred by sale. *In general*, therefore, I conclude that the origin of particular classes of property rights in the distant past is not relevant to the compensation issue.

✓ § 18. A more difficult question arises when it is claimed that the activities associated with certain classes of property rights, although hitherto permitted by law, are anti-social. This plea is not applicable when the State is proposing to buy up particular property rights in order to operate them

itself on the lines on which they are being operated now ; for this intention on the part of the State *implies* that the activities in question are not, in its view, anti-social.¹ Examples are the State purchase of privately owned railways and telephones. When, however, the State seeks, not to transfer to itself, but to destroy, a particular class of property right, the presumption is that it does consider the activities associated with that right anti-social. In cases of this kind advocates of compensation lay stress upon the fact that the activity attacked has hitherto been legal : that people have invested money in it, trusting to the law ; and that it is unfair to hit them in a way that other investors in equally legal enterprises have escaped. Opponents of compensation, on the other hand, point out that, if compensation is paid for the abolition of this class of right, an expectation of compensation, should anti-social but legal activities afterwards be prohibited, is created. Therefore people are encouraged to make anti-social investments more than they would be either if it were certain that there would be no compensation or if compensation were doubtful. It may, perhaps, be thought that, with compensation at *market value*, this effect would not follow, because market value will allow for any uncertainty there may be. But this is a fallacy. For to announce beforehand that, should expropriation take place, market value compensation will be paid would remove the uncertainty, and, consequently, cause market value to be on the basis of certainty, not uncertainty. Though, therefore, in an isolated case, when expropriation is decided on for a thing in respect of which the prospects of compensation have been uncertain, market value may be the *immediately* appropriate basis, it may not be the *ultimately* appropriate basis, when account is taken of the effect on the market values of other anti-social concerns. It should be noted that

¹ It is sometimes suggested that, when the State takes over something in order to operate it itself, the case for compensation is strengthened by the fact that there will be a fund out of which compensation can be paid. There does not seem, however, to be very much in this, except from the relatively unimportant point of view of budget technique ; for, presumably, if the State decides to abolish a thing rather than run it, this means that it expects a larger final "fund" of welfare to be furnished in that way.

this argument does not apply with full force to the expropriation of rights, which either (1) have become anti-social for the moment through an external act, *e.g.* the right to publish meteorological reports—which is anti-social in war time—or (2) have only recently come to be thought anti-social by a significant number of people. In actual practice the conflict between the opposing arguments has worked out variously on different occasions. Thus, in the United Kingdom, when the abolition of rotten boroughs was first mooted, it was proposed to pay compensation: when it was carried out in 1832, no compensation was paid. When slavery was abolished in the West Indies, twenty millions were voted by the Imperial Parliament in compensation to the owners; but, when slavery was abolished in the United States after the Civil War, there was no compensation. In like manner no compensation was paid in the United States to persons engaged in the liquor industry when the country “went dry”. An intermediate arrangement would be to alleviate somewhat the burden on expropriated persons, but not to put them in as good a position as they would have been in if not expropriated. To this end the government might make a compensation payment reckoned to yield some fraction, say one-half, of the income which the expropriated persons would have had otherwise. Alternatively it might give substantial notice of expropriation. With 5 per cent interest a notice of fifteen years is roughly equivalent to halving the burden.

CHAPTER III

REAL EXPENDITURE AND TRANSFER EXPENDITURE

§ 1. (ALL government expenditure is, on the surface, a transfer of money. But beneath the surface different things happen with different sorts of expenditure. Some of these symbolise and carry with them, so to speak, a real using up of a country's productive resources, at the order of the government or of foreigners to whom the government has made payments, so that these are not available for employment at the order of the private citizens of the country : others of them do not. Moreover, the quantity of a particular sort of government expenditure (*i.e.* of money transfer) may be altered without the quantity of resources that are used up in government service being altered. When no using up of real resources at the order of the government or of foreigners to whom it makes payments is implied in government expenditure, I call that expenditure *transfer expenditure*. When a using-up of real resources at their order of a market value equal to the expenditure takes place, I call the expenditure *real expenditure*. On this definition, government transfers to foreigners against no services, *e.g.* indemnity payments, as well as government expenditure on making purchases from foreigners, is real government expenditure. When the market value of the resources used up is x and the money expenditure made in return for this using up is y , there is a real expenditure x and a transfer expenditure $(y - x)$. Thus a given actual expenditure may, according to the circumstances, comprise (1) only real expenditure, or (2) only transfer expenditure, or (3) some real expenditure *plus* some transfer expenditure, or (4) some real

expenditure *minus* some transfer expenditure. This last case, of course, can only arise if the government, exercising coercive powers, compels people to sell to it the services of labour, equipment, or land for less than their market value.)

§ 2. This terminology, it will be noticed, is not embarrassed, as, with a less careful definition it might have been, by differences in legal form between arrangements which are in substance equivalent. (Had we made real expenditure mean expenditure *in return for which* a government obtains control over real productive resources, embarrassment would have arisen. Thus, on that definition, if the government were to hire the railway system of the country from the proprietors, the payment made to them would be real expenditure; but, if it were to raise a loan, buy the railway system and pay interest on the loan equal to what on the other plan it would pay as rent, this expenditure would be transfer expenditure. By defining real expenditure as expenditure which symbolises and carries with it—not which purchases—a using-up of productive resources at the order of government or of foreigners to whom government makes payments, we escape this paradox. The expenditure involved in the control of the railway system by the government is real government expenditure, whether it has the legal form of rent or interest.

§ 3. It is hardly necessary to point out that transfer expenditure on my definition does not mean expenditure which carries with it no using-up of real resources at all. It does not carry such using-up at the order of the government or of foreigners to whom the government has made payments. But it does carry such using-up on the order of the persons, recipients of war loan interest, old age pensioners, recipients of Poor Law relief and so on, to whom the transfer has been made. What resources these persons cause to be used up and for what purpose is, of course, their concern. In their hands the money may be used to set people and equipment to work in exactly the same way as it would have done if it had not been transferred; or to set them to make capital goods, whereas, apart from the transfer, it would have set them to make consumable goods, or *vice versa*; or to set

them to make necessities for the poor instead of luxuries for the rich, or *vice versa*. These, however, are secondary matters. The essential fact is this: real government expenditure differs from transfer expenditure, not in that the one does, while the other does not, involve the using-up of real resources, but that the using-up, which takes place in both cases, is, with real expenditure on the order of the government or of its foreign payees, with transfer expenditure on the order of the recipients of the transfer.

§ 4. Neither transfer government expenditure as I have defined it nor real government expenditure made inside the country can involve any objective burden, *i.e.* real loss of productive resources or their fruits to the country as a whole. For transfer expenditure involves no using-up of resources to the order of the government or its foreign payees; and for real expenditure inside the country there is always a *quid pro quo*, whether in the form of collective goods—army equipment, battleships, or Civil Service, to be held in the government's hands on behalf of the community,—or in the form of individual goods—almshouses, educational facilities, railway service (under a nationalised railway system), gas supply (where there is a municipal gasworks)—to be handed over by the public authorities to private persons. In no case are any resources taken away from the use of the community considered as a whole. Some items of real government expenditure made outside the country are in like case. Those payments made abroad in return for foreign supplies of goods or for interest on capital which has been employed to set up still existing equipment clearly involve no objective burden on the country in the sense defined above. But other items are of a different character. Thus it is clear that payments made by a government to foreigners in discharge of a war indemnity involve an objective burden to the full extent of the resources which they represent to the country as a whole. Payments to discharge foreign indebtedness contracted to finance a war are in an intermediate position. As against the state of things that would have existed had there been no war and, consequently, no foreign war debt, they obviously involve an objective

burden to their full amount. But a truer alternative to the existing state of things is one in which, instead of the foreign resources dissipated in war, an equivalent extra quantity of domestic resources has been so dissipated. It is true that the extra internal war debt, which this would have implied, would have involved for its future financing only transfer expenditure not carrying any objective burden. But the using-up of the extra internal resources in the war would have made it impossible for the capital equipment of the country to be as large as it in fact is.¹ If, therefore, no foreign debt had been raised, it is highly improbable that the country as a whole would have been better off to the extent of the real payment that has to be made for the service of that debt. Real government expenditure to finance foreign war indebtedness is thus best thought of as involving some, but not an equivalent, objective burden to the country.

~§ 5. Transfer expenditure and real expenditure alike involve a subjective burden to a country, i.e. a net loss of satisfaction to its members, if and in so far as they cause resources to be employed in uses that yield less satisfaction than they would have yielded if the money engaged in them had been left to fructify in the pockets of the people. It is very improbable that government expenditure will be so stupidly arranged that the whole of that devoted to any purpose will involve a burden of this kind. But it may easily happen that a mistake is made in deciding how much expenditure shall be devoted to certain objects; with the result that some of the expenditure is excessive and does involve a subjective burden.² Moreover, even when, in existing conditions, an expenditure involves no subjective burden, a change in the conditions accompanied by a concordant change in expenditure—for example, the disappearance of the risks of war accompanied by disarmament—might yield a large subjective gain.

~§ 6. These distinctions are very important, because they enable us to perceive essential differences between things

¹ For a detailed study of this matter, cf. *post*, Part III. Chap. I. §§ 5-13.

² Cf. *post*, Part I. Chap. VII.

that are verbally the same. Thus, it is widely believed that the real cost to a people of waging war is greater or less according as the rate of pay to its soldiers is high or low, and according as a large or small amount of money has to be paid in respect of their dependents. In 1914 many writers argued that Germany could conduct the war more cheaply than we could because her soldiers, being conscripts, received a much lower rate of pay than ours did. Again, it was, and still is, believed by many people that, because married men have dependents, to whom separation allowances must be paid when the men go into the army, whereas, in general, single men have no such dependents, a married soldier involves much more real cost to the nation than a single soldier. But the real cost involved in the maintenance of the army consists in the services of the soldiers themselves, who are withdrawn by war from civilian employment. Hence, the rate of pay given to them does not directly affect the real cost of the army to the community in any degree.¹ If more is paid to them than they would normally earn, a certain transference of resources is made from the rest of the community to them; if less is paid to them than they would normally earn, a certain transference is made from them to the rest of the community. The aggregate real cost of the war to them and the rest of the community combined, that is to say, to the country as a whole, is the same in either event; it is equal to the sum of the services which they render.

A second form of the same fallacy often appears in arguments about government extravagance. In many of these arguments every form of alleged extravagance is lumped together under the same head, and it is tacitly assumed that the face value of the extravagance always represents the real cost that it involves to the nation. For example, the alleged extravagance of paying £400 a year to Members of Parliament, of paying exorbitant prices to contractors or exorbitant wages to workpeople, of taking troops to some place at heavy cost and then taking them back to the place

¹ This is not, of course, to deny that a country may be indirectly weakened for war by the payment of large separation allowances; for the resources transferred may be consumed instead of being "saved" and turned into guns and shells.

from which they came, of making immense quantities of a certain kind of shell which is afterwards found to be useless—all these things are supposed to be exactly similar in character and effect. This is incorrect. From the money standpoint of the Treasury, it is, of course, true that they stand upon the same footing. They all deplete the government balances and make necessary the raising of more money. From the standpoint of the community as a whole, however, they comprise two disparate kinds of extravagance, the effects of which are wholly different. To make masses of shells of a kind that we do not want involves a real using-up of capital and labour: to transport troops from Egypt to the Dardanelles and then to transport them back again, because the ships were not properly packed, also does this. But to pay a man, whether he be a Member of Parliament, or a contractor, or a workman, much more than his services are worth, that, undesirable though it is, does not directly involve any using-up of national resources. In the same way, if the government commandeers,—and uses up in war—the services of men or buildings for less than their market worth, or even for nothing at all, this, while lowering the money expenses, does not directly affect at all the real cost which its action involves..

Yet again, interest on our internal National Debt and reparation payments to foreigners are often thought to be on the same footing. In fact, however, reparation payments involve the subtraction of so much actual real income—food, textiles, and so on—from the use of the people of the country affected; whereas the payment to domestic holders involves merely a transfer of control over those things from Englishmen in their capacity of taxpayers to Englishmen in their capacity as fund-holders. If fund-holding and taxpaying were shared out in exactly the same proportions among the people, then, *apart from the cost of administering the taxes and their indirect effects on production*, each individual person would be exactly as well off as before. A realisation of this fact displays the fallacy of two widely held opinions about the present European situation. The first of these is that Germany, having wiped out her internal

debt by the collapse of the mark, is richer and stronger, as compared with other nations, than before. It is true, of course, that her budgetary problem is simplified, but fundamentally the wiping out of her internal debt does not affect her aggregate wealth at all. The second opinion, embodied in the Report of the Dawes Committee, is that Germany ought not in fairness to bear less heavy taxation than her former enemies. Since a large part of the taxation of those countries is required to finance internal debt, this is an illicit conclusion. For £100 million of taxation to make foreign reparation payments is much more of a burden on a nation than £100 million of taxation to finance internal debt. In conceivable circumstances a nation might be able to meet internal debt up to the whole amount of its wealth without suffering any direct injury, while at the same time to meet any foreign claim at all would involve some of its members in starvation.

§ 7. The proportionate part played by *real* and *transfer* expenditures in the finance of government authorities varies, of course, from place to place and from time to time. For the Central Government of Great Britain it appears that, the Post Office and grants to local authorities being left out of account, the service of the internal debt and pensions, which constitute a dominant part, though not the whole, of transfer expenditure, amounted in 1913 to some 21 per cent and in 1923 to some 53 per cent of aggregate expenditure.¹ Setting taxation against estimated taxable income (including transfer income), Bowley and Stamp find that taxes and rates together amounted in 1911 to 11 per cent of that income, and that pensions and debt charges were responsible for some one-eighth of taxes and rates. In 1924 the corresponding percentage was about 20 per cent, of which pensions and debt charges constituted more than a third. Real government expenditure would thus seem to have risen from some $9\frac{1}{2}$ per cent to some $12\frac{1}{2}$ per cent of taxable income; and transfer government expenditure from some $1\frac{1}{2}$ per cent to some $7\frac{1}{2}$ per cent.²

¹ Cf. *Report of Committee on the National Debt*, p. 235.

² Cf. Stamp and Bowley, *The National Income in 1924*, p. 53.

CHAPTER IV

THE SOURCES OF FUNDS FOR REAL GOVERNMENT EXPENDITURE

§ 1. SINCE the raising and using of money by governments for transfer expenditure involves no net absorption of real funds from their subjects as a body, no question can arise as to the sources from which real funds are drawn. In the present and following chapter, therefore, we have nothing to do with transfer, and are concerned solely with real expenditure. Our task is to study the sources upon which drafts for this purpose may be made. It is easy to see that these consist of the following principal divisions :

(1) The output during the year, which, apart from government levies, the people would have produced of goods and services for their own consumption ; or, more strictly, the use of the productive powers which would have yielded these goods and services.

(2) The output during the year, which they would have produced of new capital instruments ; or, more strictly, the use of the productive powers responsible for these.

(3) The output during the year, which they would have produced of repairs and renewals to maintain existing capital equipment intact ; or, more strictly, the use of the productive powers responsible for these.

(4) Additional productive effort over and above what they would have resorted to if there had been no government levies.

(5) The direct use of existing capital equipment and stocks of capital goods.

(6) The indirect use of existing capital.

I propose to consider these several items in detail.

§ 2. The first three of them may be taken together. If people eat less, travel less, make use of fewer servants, burn less coal, and so forth, they set free resources which, apart from government levies, would have been used to satisfy their personal wants, to satisfy instead the needs of the government. Again, if people refrain from having new factories and plant built for themselves, which they would normally have had built, the same result follows. In the United Kingdom before the war the aggregate of home and foreign investments together was increased every year by between 300 and 400 millions sterling. Yet again, if people refrain from devoting resources to renewals and repairs of existing capital equipment, which, apart from government levies, they would have devoted to that purpose, there is an equivalent amount of productive power made available for the government to draw upon. In the United Kingdom it was estimated before the war that some £170 million worth of national effort was needed annually to keep the capital of the country intact.

§ 3. The next item, additional productive effort over and above the normal, which can be drawn upon to swell the sources available for government levies, needs somewhat longer notice. Since people want leisure as well as things, a country's resources are not likely, in the absence of government levies, to be worked to the maximum imaginable intensity, and there is, therefore, a certain amount of slack, which can be taken up at need. In most "advanced" countries there are a number of people, both men and women, who are accustomed to do no work at all, or only a nominal amount of work, to live on private means or on the earnings of other people, and to spend their lives in sport, games, social functions, travel and amusement. These people may be drawn into the ranks of active workers. Along with them may come a number of elderly persons, who, in the ordinary course of events, would have retired from industry for the closing years of their lives, but who, in fact, carry on or return to it. Some boys and girls too may be drawn into industry at an age earlier than is usual. Moreover, it is not merely from an increase in the number of workers that extra work

may be forthcoming. Men and women, who, apart from government levies, would have worked with ordinary intensity for ordinary hours, may work harder and more continuously. It is, of course, true that work carried on at too high a pressure or for too long hours means, not an increased, but a diminished, output. For example, in the earlier days of the Great War the hours worked in munition-making industries were often unproductively long. This *caveat* is not inconsistent with our thesis. (There is, however, a possible confusion here, against which it is well to guard. We may be tempted to regard as an addition to productive effort what is really, at least in part, a diversion of productive effort, and so has already been counted under one or other of the three preceding heads. This mistake is especially likely to be made with reference to women's work in war time. During the Great War, in the United Kingdom as in other countries, an enormous number of women flocked into industry. Many were engaged directly in munition-making, and many in occupations—railway service, for example—from which men had been withdrawn for military service. At first sight it is natural to regard these extra women as a net addition to the productive power of the country. This, however, is a mistake. A large proportion of the women who entered industry for the war period were withdrawn from domestic service. In so far as they worked harder at munitions than they had worked in that service, the aggregate productive work of the country was, no doubt, increased. But that part of their industrial activity which corresponded to their former domestic-service activity was not an addition to productive work. It was a transfer from work in the service of private consumption to work in the service of the war. Again, many of the women who came into industry had been engaged previously in work in their own homes. The services rendered by them in this capacity were a part of the nation's productive work, and must be set against the services rendered by them in war industry before the net addition to productive work can be arrived at.)

§ 4. I turn now to the fifth item distinguished in § 1, the direct use of existing capital equipment and stocks of capital

goods. When a government requires resources to use up, *i.e.* for what I have called real expenditure, whether in peace or war, its needs cannot, except in very special circumstances, be directly satisfied out of capital equipment. That portion of the community's capital that exists in the form of consumable articles held in store in warehouses and shops may, indeed, be useful for it. If it has need of wheat, it may draw upon dealers' stocks of wheat, cutting down these stocks from, say, ten weeks' to five weeks' supply. It may happen that certain bits of fixed capital also can be called upon. For example, in the Great War the output of new railway material for service in France was supplemented by taking up and shipping to France considerable lengths of railway track from certain English and Canadian railways. Most sorts of fixed capital cannot, however, be used in this way. Houses, factories, the greater part of the country's railway equipment, its ships, its mines and mining equipment, its land and its machines cannot be turned to any using-up purpose, but must retain the quality of capital. Hence, the extent to which depletion of existing capital constitutes an available source for the direct provision of real revenue to government is slight.

§ 5. There remains the indirect use of existing capital. This is open only when conditions are such that command over capital items can be exchanged with foreigners for goods and services of the sort that the government concerned needs for the particular kind of real expenditure for which it is making provision. This matter is of practical importance only in war time, and need, therefore, only be discussed in connection with war requirements. An essential condition for the use of this resource is the existence of free communication with the outside world. If this exists, pieces of capital, that, from their physical nature, are incapable of being turned to war service directly, can now be so turned indirectly. They can be sold to foreigners in exchange for munitions and food and other things capable of entering into immediate war consumption. Different pieces of capital differ greatly in the ease with which this can be done. There is an important

distinction between objects that can be transported outside the country to a foreign buyer and objects in respect of which it is only possible to transfer a title of ownership within the country. Gold and silver, jewellery and works of art can actually be shipped abroad, if the seas are safe enough. When this is done, the foreign buyer runs no risk. But titles to ownership over things that cannot be shipped abroad, whether country estates or shares in companies whose works are situated here or the bonds of British local authorities, are in different case. A foreigner who buys these things runs the risk of finding his claim barred at the end of the war, should the nation with whose subjects he has dealt be overwhelmingly defeated. This kind of capital is, therefore, apt, in war time, not to find ready foreign buyers. There is, however, yet a third kind of capital that the citizens of a warring State may possess, namely, holdings of securities issued by companies in neutral countries, which are capable of making the things their government wants for war, and in which, therefore, it is anxious to obtain purchasing power. These things citizens of the neutral countries will much more readily buy, and the munitions and food purchasable with the proceeds of their sale may yield to the selling countries a substantial supplement to their real war fund. During the Great War, as is well known, the dollar securities held by citizens of the United Kingdom enabled us to buy an enormous volume of war supplies from America, not only for ourselves but also for our Allies.

§ 6. When international communication is open, a country's capital may become a resource for its government to draw upon in yet another way, namely, by making it possible to raise foreign loans. These loans may be obtained in some small measure by individuals whom foreigners are willing to supply with goods on long credits; they may be obtained by banks in the form of a deposit of balances by foreigners; they may be obtained by a belligerent government either through individual foreign subscriptions to its issue of war loan, or by foreign loans directly negotiated with a private syndicate, or with the government of a foreign country. If there is widespread fear that the would-be

borrowing country will suffer overwhelming defeat, loans of this kind will be difficult to raise, for the same reason that the securities of concerns resident in the country are difficult to sell in foreign markets. In the Great War the United Kingdom and its European Allies were enabled to secure a very much larger mass of them than would otherwise have been possible, because, after the entrance of the United States into the war, there was a powerful *political* motive for granting them. From the point of view of the borrowing nation, there is evidently no great difference between selling foreign securities held by its citizens and selling its own government's promises to pay. Under the former arrangement the subsequent flow of income into it from abroad is checked; under the latter the subsequent flow out of it to abroad is correspondingly augmented.

✓ § 7. It may be thought at first sight that the various resource items distinguished above, from which the real expenditure of a government is provided, can be grouped in such a way as to distinguish sharply between those resort to which throws a burden respectively on the present and on the future. Economy of personal consumption and extra work seem to be at the expense of the present; economy in new investment, refraining from repairs and renewals of existing capital and depletion of capital at the expense of the future. But no such simple division is really warranted, for two reasons. First, monies obtained by diversion from consumption are not wholly irrelevant to the future. There is such a thing as investment in human capital as well as investment in material capital. So soon as this is recognised, the distinction between economy in consumption and economy in investment becomes blurred. For, up to a point, consumption is investment in personal productive capacity. This is specially important in connection with children: to reduce unduly expenditure on their consumption may greatly lower their efficiency in after-life. Even for adults, after we have descended a certain distance along the scale of wealth, so that we are beyond the region of luxuries and "unnecessary" comforts, a check to personal consumption is also a check to investment

in capital interpreted broadly, and, as such, hits the future. Secondly, that part of the needs of government which is satisfied by augmented production will also, in some measure, strike the future. If a country carries extra work beyond a point, it draws in fact, though not in name, upon capital. It does this if it works any of its citizens with such intensity, or for such long hours, as to wear them out prematurely. It has already been pointed out that length of working day and intensity of effort carried too far defeat their own purpose by bringing about a diminution, instead of an increase, of output at the time. But there will be a stage before this, at which, though the extra hours and intensity improve output over a comparatively short period, such as is likely to be covered by a war, they damage it over the longer period covered by the working life of the people affected. This implies a using-up of human capital. Again, a country may augment the real resources available for its government by turning its boys and girls on to immediately productive work instead of leaving them to their normal period of school-time and training. This corresponds to the device of refraining from repairs and renewals of material capital: for the human capital of the country can only be kept intact if successive generations are trained up to take the place of their predecessors at a like level of educated capacity. These considerations make it plain that any attempt to distinguish with accuracy how far any particular set of government needs are being, or have been, provided at the expense of the present or at the expense of the future would encounter formidable difficulties. Nevertheless, as a rough practical conclusion, we may reasonably assert that, whereas resources obtained by using up existing capital, by refraining from repairs and renewals, or by refraining from the creation of new capital wholly hit the future, resources obtained by augmenting production or by diverting resources from consumption are secured, at all events in large part, at the expense of the present.

CHAPTER V

THE RELATION BETWEEN WHAT GOVERNMENT GETS AND WHAT TAXPAYERS AND LOAN-MAKERS SURRENDER

§ 1. WHEN a government has settled the kinds of different commodities and services to which it wishes to devote its real expenditure—so far as this is internal—and the proportions in which it wishes (at given price levels) to distribute its purchases among them, it seems at first sight that the quantity of these things that it is able to procure must depend, in any given set of general conditions, upon the amount of money that taxpayers and loan-makers hand over to it, and on nothing else whatever. This, however, is not entirely true even of regular normal expenditure by governments, and it is far from true of large emergency expenditures such as were necessitated by the Great War. Two other factors besides the amount of money that the government raises play a part. These are respectively (1) the decision of the government as to whether and, if so, in what degree it shall control by law the prices of the things it wishes to buy and (2) the decision of the public as to the class of goods and services with which they will dispense in order to conserve the money they hand over in taxes or loans to government.

§ 2. (So far as normal regular expenditure is concerned it is reasonable to suppose that a government will be able to buy what it needs at prices determined by general market conditions, in such a way that sellers obtain ordinary rates of return; and this, in fact, it usually does. With sudden emergency expenditure, however, it may well happen, as was indicated in Chapter II., that some sellers are able

to out-bargain the government and to obtain higher prices than market conditions really warrant. Thus, it is frequently asserted that in war-time contractors, by semi-fraudulent means, secure from the government abnormally high prices for abnormally bad goods. The extra and unnecessary payment thus made is really a transfer of purchasing power to certain members of the public against no services.) We may say either that, with a given money levy from the public, the government has got less stuff than it would have got if contractors had not defrauded it: or we may say that the net money levy from the public as a whole is reduced below the levy from taxpayers and loan-makers by the sums that are returned to other members of the public in the form of excess prices. On either showing the government gets so much less real stuff than it would have done had it been able to prevent contractors from out-bargaining it. (By coercive price policy it may succeed in doing that. Again, it may well happen that, when a government suddenly demands a large extra quantity of some commodity, the true economic price of that commodity is, in consequence, raised much above its former level, with the result that certain fortunately placed sellers are in a position, without any fraudulent or semi-fraudulent over-reaching of the government buyers, to secure very large profits; and that the government, to prevent this, forces them by legislative decree to sell to it at prices substantially less than the true economic price. In these circumstances we may say either that the government gets more stuff for the same money, or that it forces those sellers in effect to add to the money it has raised from taxpayers and loan-makers a further sum equal to the difference between what is actually paid to them and the true economic value of their wares. On either showing the government gets so much more real stuff than it would have done had it not exercised its political power so as to fix prices below the level to which general economic forces tended to raise them.)

§ 3: The second topic distinguished in § 1 demands longer discussion. It is obvious that a government, having raised a million £s from taxpayers and loan-makers, is very unlikely

to spend that money on exactly those things or services which the public would have bought with it, had the money been left in their hands. This is true in some measure even of normal government expenditure. It is true in much greater measure of emergency expenditure necessitated by a war. What private people then do without consists in pleasant food, the work of domestic servants, new houses, new motor-cars, petrol, continental travel, new factories, new clothes, and so forth. What the government gets consists in the services of specially enlisted soldiers, sailors and airmen, together with immense masses of guns, shells, aeroplanes, tanks, poison gas and explosives. If there had been no war, the great bulk of these things would not have come into being at all. They are, and are bound to be, quite different from the things that would then have come into being. Hence there is apt to come about a shifting of *relative prices*: and, given the way in which the government chooses to spend its money, the amounts of goods and services of the kinds it desires which become available for it will be different according to the way in which the public has distributed its own associated economies:

§ 41. About the term economies, however, a preliminary word is necessary. At first sight it might seem that, whenever an individual pays over £100 to the government, he is necessarily economising, in the sense of cutting down, either his own consumption or his own investment by the worth of £100. This, however, is by no means so. A part of the money paid over by particular individuals to the government may represent, not real costs borne by them, but real costs thrown by them on to the shoulders of other people. Thus, suppose that a man obtains funds to pay his taxes or subscriptions to war loan by cutting down gifts and charities or reducing payments to employees whose services he still retains. A person who "economises" in these ways does not really economise at all, and does not himself hand over any real resources for the service of the government. What he does is to throw the task of meeting the requirements of government upon somebody else. If he reduces an old servant's pension by £100, this old servant has somehow

(unless he, in turn, can pass the task forward to some one else) to work harder, to economise, to refrain from new investment or to use up capital, to the extent of £100. The original "economiser" has shouldered no part of the State's burden; he has merely transferred the obligation to do this.) In like manner, if a man sells securities in his possession to a fellow-citizen and pays taxes and war loan instalments out of the proceeds, what he has done has been to part with a property right in order to induce somebody else to undertake the task of working harder, or of economising in consumption, or of refraining from investment in new real capital, or of "using up" real capital by selling it to foreigners or otherwise. He himself has done none of these things. He has acted as an intermediary, not as a principal, in undertaking the real costs that his money payments represent. The same thing is true if he obtains the money he hands over to the government by borrowing either from private persons or from banks resident in his country. Finally, the same thing is true, up to a point, when people provide funds for taxes and government loans by reducing their consumption of articles—tobacco, wine, beer or sugar—a part of the price of which is made up of customs or excise duties. Suppose, for example, that a man meets a new income-tax claim for £60 by cutting his expenditure on these things by that amount, and that this involves a reduction of, say, £20 in his payment of indirect taxes. In these circumstances his apparent new economy of £60 worth of stuff represents, of course, a real new economy of only £40 worth of stuff. In what follows we are concerned with the effects, not of shifting or evading burdens, but of different ways of actually bearing them.

§ 5. Let us take, first, normal year-to-year government expenditure: so that our contrast is between a set of regular government purchases, to which production has had full time to adjust itself, and a corresponding set of regular private purchases, to which, in the absence of the government needs, production would have had full time to adjust itself. In these circumstances what sort of difference is made to the real receipts of government if the enforced economies of the public are of one sort or of another sort? It is well known

that the price of some things is higher and of others lower when they are regularly produced on a large scale than when they are regularly produced on a small scale. Hence, if the government was accustomed to spend a million £ a year on something that the general public, economising in other things, contrived to buy on the same scale as it would have adopted had there been no tax, it might get more and it might get less of this thing than it would have done had the public decided to economise in respect of it. In actual fact, however, when we consider the sort of things to which the normal expenditure of government is actually in the main directed—the services of soldiers, sailors, civil servants, educationalists, builders, and so on—it is plain that this point is of no real significance. (Time being allowed for the lines of industrial and other activities to become adjusted, government authorities will get substantially the same quantity of the things and services they need out of a given expenditure, whatever routes of economy the public follow in order to provide the money. From the standpoint of normal government finance it is the amount of purchases surrendered by the public that matters, and not, in any significant degree, the kind of purchases.)

§ 6. (With emergency government expenditure, such as is made necessary by war on a large scale, this is not so. Here we can no longer suppose that full time is allowed for productive activity to adjust itself to altered conditions of demand. The capacities of individual men and individual plants must be taken more or less as given. Moreover, the alteration of output required may be very large. Hence the kind of purchases that the public elect to surrender may affect seriously the amount of its needs that the government is enabled to satisfy out of a given money revenue. This important point is well illustrated by a comparison of two extreme examples. First, suppose that the public are accustomed every year to buy a million £'s worth of shells and to explode them for amusement in a barren place. If they decide in war time to dispense with this luxury, the productive powers they thereby release from their service are free to make an equivalent mass of shells for the govern-

ment ; and shells are things that the government greatly wants. Secondly, suppose that the public are accustomed to spend a million £ in purchasing exquisite unexportable hand-made lace, manufactured by people who are unable to do anything whatever except make this lace. If they decide to dispense with this luxury, they release from their service productive powers which, *ex hypothesi*, are incapable of contributing anything whatever to the war needs of the State. On the supposition, then, that the shells and the lace occupy similar positions in the scale of people's wants, both economies will involve about the same sacrifice of private satisfaction, but one will help the war fund greatly, the other not at all. Extending the line of thought that these illustrations suggest, we readily conclude that, other things being equal, different sorts of economy on the part of the public are more or less effective means of furnishing the government with what it needs, according as the productive powers they set free from private service are more or less well fitted to produce things that the conduct of war requires. The practical implications of this principle may conveniently be set out in two divisions, according as they affect purchases of direct personal services or purchases of commodities!

First, it is plain that the services of doctors, of men of mechanical knowledge, of chauffeurs and of young able-bodied men fit for military service and not possessing any specialised skill are, relatively to the price commonly paid for them, of great value for war. On the other hand, the services of lawyers, of highly skilled gardeners, of poets, of men learned in the ancient languages, of musicians, of actors, of young men medically unfit or with conscientious objections to combatant service, of midwives, of women with special skill as children's nurses, of ballet dancers and of music-hall artistes, are, relatively to their price, of very little value for war. Therefore, other things being equal, people will make a more effective contribution to the State's resources, if they obtain the money for their contribution by dismissing chauffeurs, young men servants and women servants without specialised training but physically fit for industrial work, than if they obtain it by dismissing other (and probably

older) servants, whose value is chiefly due to specialised quality of little utility in war—an illustrious Latinist, an artist in cookery, a nursery maid or governess exceptionally skilled in her chosen task but inept at handling material things, a court musician or a court jester.

(Secondly, consider purchases of commodities. There are certain things that are wanted by government in exceptionally large quantities for the use of its armies—things such as gunpowder, petrol and meat. These are obviously good things in which to economise, from the above point of view. Then there are things made out of materials essential to war needs, economy in which sets free these materials. Examples are articles made of leather, wool and steel.) Again, there are things made by the same kind of machines and workpeople as are required for making things essential to war needs. These include the products of engineering works and the plant required for setting up war factories. Yet again, there are things the acquisition of which involves the use of ship space and train space that are in great demand for military ends. *Pro tanto* these things—imports from overseas, such as oranges and bananas, and articles the raw materials of whose manufacture are largely imported, such as beer—are suitable objects for war economy. (On the other hand, there are a number of commodities, which are not useful for war purposes and the value of which is not to any substantial extent due to material, plant, labour or transport services useful for such purposes. These things are, in comparison with the others, unprofitable objects of war economy. Among them should be included ball-dresses and similar costumes made at home, the value of which principally depends on highly specialised work of a kind for which war has very little use. There should be included, too, water, as supplied by a water company to a town, and, in lesser degree, gas and electric light. Finally, there should be included the services rendered by museums and art galleries. In these institutions and their collections there is embodied an enormous capital plant quite useless, or nearly useless, for rendering war service. If, as a result of our economies, they are shut down, their staffs may,

indeed, be utilised in war, but the public loses, not only the use of their staffs, but also the use of the capital establishment of these institutions; and that loss is balanced by no corresponding gain to the government's war efficiency.

§ 7. These results lead at once to the problem of private duty. In view of the fact that certain sorts of economy on the part of the public are more effective aids to war than others, what ought the patriotic public to do? It is important that there should be no confusion about the precise issue here. The preceding discussion has made it plain that several sorts of luxury goods are less advantageous objects of economy than the bulk of necessary goods. The issue is not whether, in view of this fact, a rich man may properly continue to buy ball dresses in war time. He ought not to buy ball dresses, because, by refraining from doing so, he can cut his aggregate expenditure down lower than he could do otherwise. The issue is: given the amount of the cut to be made in his aggregate expenditure, would he do better to take £100 off ball dresses or off bread? The hasty answer, of course, is that every one ought to concentrate entirely upon the sorts of economy that are most helpful towards victory. But this answer is not correct. With sufficient knowledge it should, indeed, be possible, on the basis of what has been said, to draw up a kind of order of merit among different sorts of economies from the point of view of their comparative effectiveness. But this order of merit cannot be used as a direct criterion of private duty. People's duty depends, not only on the comparative usefulness to the State of different sorts of economy, but also on the comparative sacrifice to themselves that different sorts involve. In general, the last shilling that they choose to spend on one thing may be presumed to yield them about as much satisfaction as the last they spend on another thing. But on all things the earlier shillings are likely to yield them much more satisfaction than the last shilling. Hence, it will, in general, hurt them much more to concentrate their economies upon a few things than to spread them over many. People, therefore, have no duty to select for economy the thing that stands first in our order of merit, to stop com-

pletely their purchase of that and to proceed in the same way down the list till the whole reduction in expenditure that they intend to make is accomplished. Nor have they necessarily a duty even to knock more expenditure off a thing high up in our order of merit than off one lower down; for, if the one high up is something for which their demand is highly inelastic—bread, for example—a tenth £ knocked off that will mean a much bigger sacrifice for them than a tenth £ knocked off something for which their demand is elastic. They have a duty, however, to push their economies in things high on the list rather further, and on things low on the list rather less far, than their personal preferences by themselves suggest. *To what extent* they ought to do this could, of course, only be determined on the basis of a full knowledge of all relevant details.

§(8. Moreover, the issue is complicated by a distinction that must be drawn between the duty of a single individual and the duty of a group. If a single individual, who has to cut down his aggregate expenditure by £1000, on patriotic grounds cuts his consumption of petrol 10 per cent more, and his consumption of music 10 per cent less, than he personally likes to do, the price of petrol will be put a little lower and the price of music a little higher—from the short period point of view relevant to the war—than they would have been put otherwise. Consequently, other people will buy a little more petrol and a little less music than they would have done; and his patriotic action will thus be robbed of its full effect.¹ How far the good he tries to do will be cancelled in this way depends on the nature of the demand and supply of the commodities concerned. If the demand is highly inelastic, there will be very little cancelling: if it is highly elastic there may be a good deal. But, if there is any cancelling at all, for one out of a hundred individuals to cut off his petrol consumption (in preference to his music consumption) in a given degree helps the government less than one-hundredth as much as similar action on the part of the whole hundred would do.¹ (This leads up to

¹ Analytically, the basis of this argument can be developed as follows. Let there be n similar purchasers of a commodity. Let the quantity

an important practical inference: In order to bring about a net reduction of a million gallons in the consumption of petrol by the public as a whole, patriotic volunteers would need to cut *their* consumption by, say, $1\frac{1}{4}$ million gallons, non-patriots absorbing the quarter million into theirs. Apart from differences of wealth, and so on, among the persons concerned, this shift in the destination of the quarter million gallons necessarily involves a loss of satisfaction unaccompanied by any gain to the government. The shift and associated loss would be obviated, and a net cut of a million gallons in the consumption of the public would be obtained at less real cost, if, instead of cuts being accepted from some persons, they were ordered for all. A net cut of a million brought about in the latter way might, therefore, involve a balance of public gain over private burden, though one brought about in the former way did not. It follows that, as with such things as the closing of shops on Sundays and limitations upon the hours of work, it may be the duty of the community as a whole, acting through its government, to enforce upon all its members a more stringent selection of economies than it would be the duty of any of them acting alone to make on his own initiative)

§ 9. Three forms of government action are possible: propaganda, the imposition of duties on the purchase of things the private consumption of which it is especially desirable to cut down, and direct restriction of individual purchases by rationing. The method of propaganda does not call for study here. Its general character is obvious and its detailed application the concern of political technicians. The method of duties cuts off from each purchaser an amount of con-

sumed by each be A and the elasticity of the demand of each $-\eta$. Let the elasticity of supply of the commodity be ϵ , and let this be positive. Then, if m of these purchasers cut down their consumption from A to nothing, it is easily shown that the reduction in aggregate consumption will be, not mA , but, as a first approximation, $mA \frac{\eta\epsilon}{\eta\epsilon - \eta(n-m)}$. This is obviously a larger proportion of mA , the larger m is, provided that η is neither zero nor infinite. If $\eta=0$, it is equal to mA ; if η is infinite, it is equal to nothing.

sumption varying with the amount of his normal purchases coupled with the elasticity of his demand. If the demands of two persons are equally elastic, the cuts from them will be proportioned to their normal purchases. Compared with direct restriction by rationing, this method has the advantage that, as between the two equally rich people, one of whom has an inelastic demand for one thing useful for war, say petrol, and the other an inelastic demand for another thing of similar usefulness, say steel, it allows the first to make a bigger cut in petrol, and the second a bigger cut in steel, instead of forcing, to the common injury, equal cuts, or equal rations, in each of these things indifferently on both of them. As between persons of different wealth it is, however, less satisfactory. In the first place, as will be shown in detail presently, all specific duties upon commodities of wide consumption tend to strike poor people very heavily in comparison with rich people, because they do not take account of differences of quality. There is, therefore, a danger that a large use of the method of duties would involve an unfair burdening of poor people. This danger could, no doubt, be partly obviated by compensatory adjustments of direct taxation. But, in the second place, there is a danger that, even if the aggregate tax burden thrown upon poor people is not made unduly large, poor people will be forced to divert their consumption away from particular things subjected to duty to an extent that injures them more than it helps the government. The method of direct restriction by rationing, on the other hand, can be applied in such a way as to leave the consumption of really poor people untouched. This is a strong argument for that method, even when government control over prices is not attempted. When control is attempted, the method of duties is obviously not applicable, and the method of restriction by rationing alone is in the field.)

CHAPTER VI

THE FINANCE OF BUSINESS UNDERTAKINGS OPERATED BY PUBLIC AUTHORITIES

1. It is not the purpose of this volume to enter upon controversial issues as to how far public authorities should undertake forms of activity which might be undertaken by private concerns in the ordinary way of business. It is well known that in some countries the railways are run by joint-stock companies; in others they are operated by the government; in yet others they are worked as semi-public concerns. Again, in the United Kingdom, it has often been urged that the coal mines and the service of supplying intoxicating drinks should be "nationalised", and various ingenious forms of public administration, designed to eliminate the dangers, on the one hand of political management and on the other of bureaucracy, have been advocated for them. Yet again, such "public utility services" as gas supply, water supply, tramways and electricity are sometimes in the hands of private companies and sometimes in those of local authorities: and the comparative advantages of the two arrangements are hotly debated. It is important that the right choice should be made between these rival arrangements, and it is evident that this choice must turn in the main on the questions (1) which of the two, in the existing economic and political conditions of the country we are studying, is likely to prove technically the more efficient, and (2) whether and how far it would be practicable under private enterprise to prevent the operators from making monopolistic exactions from the public.¹ These are not problems of

¹ Cf. *The Economics of Welfare*, Part ii. chap. xxii.

Public Finance, as I understand that term. I do not propose, therefore, to discuss at all the question over what classes of enterprise it is desirable that public operation should be extended, but to proceed on the assumption that this is already determined. Our interest in the matter is thus limited to the question in what way the products of publicly operated enterprises should be paid for.

§ 2. The enterprises with which we have here to do, since, *ex hypothesi*, they might be undertaken by private concerns in the ordinary way of business, are necessarily of a sort which it is *practicable* to finance by fees charged to those persons who make use of the goods or services supplied by them. They do not include undertakings such as the upkeep of the army, navy and civil services, but only undertakings which are specifically "beneficial" to particular individuals. Thus a nationalised Post Office, telegraph system, telephone system, railway system, road system, or educational system, and a municipalised tram, gas, water, or milk supply belong to our subject-matter. For the services rendered by some of these enterprises, *e.g.* the Post Office, railways and gas supply, fees are invariably charged; for those rendered by others, *e.g.* roads and education, fees have sometimes been resorted to, but more frequently no charge is made, the expense being borne by the general body of taxpayers. The purpose of the present chapter is to inquire, given that public authorities have decided to perform certain functions which it is technically possible to finance by fees, in what conditions that method of finance is desirable.

§ 3. It is plainly in the general interest that the resources of the community should be so distributed among different services that the last unit devoted to any one of them yields the same satisfaction as the last devoted to any other. Aggregate resources being limited, this implies a certain restriction in the supply of every service, as against the amount of it which people would use if they were allowed to have at no cost as much as, at no cost, they desired. If no restriction is imposed, there is a social waste, the extent of which depends on the nature of people's demand for the service. If that

demand is highly inelastic, in such wise that they would take much the same amount of the service if it were given away for nothing as they would do if a cost-price fee were attached to it, the waste will be small: if the demand is highly elastic, it will be large. Where the conditions are such that the waste resulting from gratis supply in unlimited quantities would be large, that method is ruled out of court. Where, however, the waste would be small, it needs further study.

§ 4. The most important services falling into this category are elementary education, medical attendance and water supply. Elementary education has an inelastic demand because people who want it want it badly and will purchase it whatever, within reasonable limits, it costs: whereas people who do not want it will not be induced to take it, except under compulsion, even if it is offered to them for nothing. Medical attendance has a highly inelastic demand because, when people are well, they do not want doctoring at any price, and, when they are ill, they want it very much. Water has a highly inelastic demand in ordinary conditions because it is, in any event, so cheap that to most people variations in its price do not seem to matter. Moreover, all these three things, education, medical attendance and water are things that carry indirect benefits not obvious at first sight to the purchasers, so that, from a social point of view, it is desirable that they should have more of them than they would be likely to buy at cost price if left to their own devices. Thus, in regard to these services, a good part of any apparent waste that might come about in consequence of gratis supply in unlimited quantities would not be real waste. So strongly is this realised in the case of education that in Great Britain the government, not content with gratis supply, has framed legislation to ensure compulsory use.

§ 5. Arguments about waste are plainly inapplicable when it is a question of substituting gratis supply in unlimited quantities, not for individual purchases at an aggregate price varying with the *actual* quantity of purchase, but for individual purchases at an aggregate price varying with an *estimated* quantity of purchase. Thus, when the water-rate which a man has to pay is based, not on his actual use

of water as determined by meter, but on his assumed use as determined by the size of his house, the existence of the rate will make no difference to the amount of his consumption. In like manner, where people are accustomed to pay for the services of a doctor by subscriptions to a sick-club, the amount of which is independent of the extent to which they individually call in a doctor during a year, no difference would be made to the amount of doctoring they ask for if doctors' services were provided free at the public expense. Arrangements of this kind, it will be noticed, could not in practice exist unless the service in question were, in its own nature, one of fairly inelastic demand. Thus the fundamental condition that makes gratis supply in unlimited quantities feasible is always inelasticity of demand.

§ 6. When this condition is not satisfied, gratis supply in unlimited quantities is, as was said in § 3, *not* a feasible arrangement. But this does not necessarily rule out gratis supply altogether. Whether it does so in fact depends on whether the conditions are such that public authorities can so limit supply as to prevent a large waste of resources without creating for themselves other intractable problems. The most important service in connection with which conditions of this kind prevail is that of roads. Public authorities are free to decide of their own motion how many roads to make and in what state of repair to maintain them ; and there is not, in general, any danger of such overcrowding as to render necessary the forcible exclusion of any would-be users. The case of roads is, however, peculiar. As a rule we have to do, not with services furnished by a passive instrument in which very little prime cost is involved, but with consumable commodities or such services as the actual carriage of goods or passengers on a railway. Here to make no charge for the commodity or service and yet to restrict the supply of it below what people would wish to take at a nil price must lead to serious difficulties in distribution. The quantity demanded exceeding the quantity forthcoming, the sharing out of what supplies there are will be determined by luck, physical force, the possession of private influence with the distributing agents, and so on. The only way in

which public authorities can obviate this is by some system of rationing the available supplies among would-be consumers, such as was in fact employed for certain commodities during the Great War. Since it is administratively impossible to construct any such system otherwise than upon broad and simple lines, allowance cannot be made for detailed variations of circumstance as between particular individuals. Even in war time, with commodities so simple as staple foods, the difficulties and anomalies were very great. It is certain that any attempt, in time of peace, to ration, say, railway travel would collapse in exasperation and ridicule. In all cases of this kind, if gratis supply without limitation of quantity is ruled out on grounds of waste, gratis supply in any form is ruled out.

§ 7. Considerations concerning waste thus enable us to say, with regard to several classes of goods and services, that, if the government decides to provide them, it should finance their provision by fees. For certain goods and services not included in this class the same conclusion can be reached on other grounds. *Prima facie* it is fair that the users of ordinary services should pay for them in proportion to their use, and should not receive a subsidy at the expense of other people. No doubt, in some circumstances social welfare can be promoted by taxing relatively rich people for the benefit of relatively poor people, and, although it will not often be desirable for such transfers as are made to the poor at the expense of the rich to be distributed among them in proportion to their consumption of a particular commodity, this may be desirable sometimes. In that event the fee due from poor people should be partly or wholly remitted, the loss being made good out of the general revenue.¹ Elementary education is a service which, it is generally agreed,

¹ It is sometimes held that funds for the subsidy should be raised, not out of the general revenue, but by charging fees in excess of costs to richer classes of consumers—that, for example, cheap workmen's tram and rail tickets should be financed in this way. Unless, however, we have decided on general grounds that rich purchasers of these particular services ought to be taxed for *general purposes* through a tax assessed upon them, this contention is, I think, unsound: for there is no reason to single out, to bear the cost of the subsidy, those particular rich men who happen to ride frequently in trams or trains.

may properly be treated in this way. It is felt that, when, as in this country, government compels a man to accept that service at its hands, whether he wishes to or not, it would be unfair to ask him to pay for it. This, however, is a rare case. For most kinds of goods and services supplied specifically to individuals, even when gratis provision would be technically practicable, it is deemed fair to charge fees on an equal scale to all consumers.

§ 8. In certain conditions, however, the adoption of this system would cause great inconvenience and involve heavy expenses of collection. M. Colson argues forcibly that this consideration, though of comparatively small weight as regards the use of canals and rivers by large vessels, which usually make long voyages and can be visited at stopping-places at considerable distances apart, is of immense weight as regards roads. “*Là, les transports sont fractionnés indéfiniment; les piétons, les petits véhicules sont innombrables; beaucoup de transports, presque tous dans les campagnes, sont effectués par les intéressés avec leurs propres moyens, sans qu’aucun contrat, aucune écriture les constate. Les trajets sont extrêmement courts, de sorte qu’il faudrait une armée d’employés, répartis de kilomètre en kilomètre sur un réseau immense, pour les relever tous—sans d’ailleurs qu’on puisse y suppléer par des abonnements, car l’utilisation des véhicules et la proportion représentée par les transports, dans le travail fourni par les chevaux de culture, sont trop inégales. La perception de péages sur les routes était encore possible, quand le roulage à grande distance représentait l’élément principal de leur fréquentation; depuis que le développement des chemins de fer n’y a plus laissé subsister qu’un trafic local, cette perception entraînerait des frais et une gêne intolérables, si on voulait la généraliser; elle n’est plus admissible qu’au passage des rares ouvrages d’art ayant entraîné des dépenses exceptionnelles, et c’est pourquoi, en fait, on y a renoncé partout ailleurs, dans tous les pays civilisés.*”¹ In short, a little “unfairness” as between individuals must in this matter be accepted in order to avoid a greater evil.

¹ *Cours d’économie politique*, vol. vi. pp. 52-53.

§ 9. As a result of this discussion it appears that, when public authorities provide commodities and services for the specific use of particular individuals, gratis supply to the users is but rarely desirable. The broad general rule should be to finance these public enterprises by charging fees to users of the commodities and services concerned proportioned to the amount of their use, and adequate in the aggregate to cover all costs. This conclusion, of course, leaves open the further question whether or not taxation should be levied *through* these commodities and services. If a particular commodity or service, which happens to be provided by a public authority, is adjudged a suitable object on which to assess a tax, all that is necessary is to embody the tax in the fee charged, thus raising the fee above what is required to cover normal costs of production by the amount of the tax to be imposed.

CHAPTER VII

THE RANGE OF GOVERNMENT EXPENDITURE

§ 1. IN so far as government departments engage in the manufacture of goods and services to be sold for fees so arranged as to cover cost of production, the amount of resources which will be devoted to these purposes is automatically determined by the public demand. The main part of a modern government's activity is not, however, of this class. The bulk of its real expenditure is devoted to services of a general sort—defence, civil administration and so on—which cannot practicably be sold against fees to individuals; while the whole of its transfer expenditure is outside the range of fees altogether. Hence there is no automatic machinery to determine how far expenditure shall be carried; and some other method has to be employed.

✓ § 2. At any given moment it is probable that large parts of current transfer expenditure will be regulated by practically irrevocable contracts. In Great Britain at the present time expenditure on the services of the debt, war pensions and old age pensions clearly belong to this class. On the other hand, expenditure on subsidies to particular industries or particular classes of persons and expenditure on Poor Relief are optional, in the sense that the government is free, within fairly wide limits, to determine their amount by present policy. With the exception of government payments in interest and sinking fund on foreign-held debt, practically all real expenditure is optional in this sense, so far as legal considerations go: but, as regards a great deal of it, economies could not be carried very far

except at the cost of breaking away from deeply rooted traditions. The optional parts of expenditure—the only parts which are practically subject to control—ought plainly to be regulated with some reference to the burden involved in raising funds to finance them. This aspect of Public Finance is an important one. But it is not a main theme of my present study, and can only be touched upon briefly.

α § 3. As regards the distribution, as distinct from the aggregate cost, of optional government expenditure, it is clear that, just as an individual will get more satisfaction out of his income by maintaining a certain balance between different sorts of expenditure, so also will a community through its government. The principle of balance in both cases is provided by the postulate that resources should be so distributed among different uses that the marginal return of satisfaction is the same for all of them. Evidently this is true of the real expenditure of governments, so far as this is not already determined by past contracts. Among various forms of optional transfer expenditure the same principle evidently holds; and—though here the matter is more difficult to envisage clearly—it also holds between optional real expenditure in general and optional transfer expenditure in general. Expenditure should be distributed between battleships and Poor Relief in such wise that the last shilling devoted to each of them yields the same return of satisfaction. We have here, so far as theory goes, a test by means of which the distribution of expenditure along different lines can be settled.

§ 4. This method of approach suggests an analogous test for determining how large government expenditure in the aggregate ought to be. If a community were literally a unitary being, with the government as its brain, expenditure should be pushed in all directions up to the point at which the satisfaction obtained from the last shilling expended is equal to the satisfaction lost in respect of the last shilling called up on government service. This last, or “marginal” shilling is, of course, to be regarded as made up of parts contributed by all of the separate contributors to govern-

ment funds in proportion to their respective contributions, not as the last shilling taken from the poorest contributor. So interpreted, the above conception, though, as will be shown in a moment, it is not really adequate to the conditions of real life, nevertheless enables some useful, if fairly obvious, deductions to be drawn.

§ 5. First, it enables us to see that the *optimum* amount of government expenditure, whether for actual using-up or for transfer from relatively rich to relatively poor persons, is likely to be larger, the greater—the numbers of the population being given—is the aggregate income of the community. For, other things being equal, the marginal sacrifice involved in raising n shillings (assumed to represent a given real value) from the public will be smaller, the larger is the number of shillings constituting the public income. After a destructive war, in which capital equipment has been allowed to run down and the organisation of markets has become dislocated, real income will, in general, be diminished, and, with it, capacity to provide funds for government. Therefore, certain government expenditures, which it used to be worth while to undertake, a country may no longer be able to “afford”. Secondly, other things being equal, if and when new opportunities for expenditure by government, that would yield large benefits or obviate large evils, are opened up, and no corresponding opportunities for expenditure by private persons are opened up at the same time,¹ the balance between the marginal benefit and the marginal damage of raising revenue will be struck at a higher point; *i.e.* more revenue ought to be raised. Thirdly, when aggregate income and population are given, if a large part of the income is concentrated in the hands of a few rich persons, it is possible to frame a tax-scheme that will raise a given revenue with less immediate marginal sacrifice than would be imposed under any scheme if the income was spread evenly over the whole community.²

¹ The purpose of this qualification is to exclude such things as the invention of new uses for capital (*e.g.* in railway building). These do not necessarily give ground for raising more revenue, even though government is fully competent to build railways; for private capitalists are also competent to do this.

² When we speak of the distribution of income as a relevant factor in

Lastly, other things, including income-distribution, being equal, the immediate marginal sacrifice involved in the raising of a given revenue will be smaller the more progressive is the revenue-raising scheme. Thus, subject to what will be said in Part II. Chapter IV. on the relation between *immediate* sacrifice and *total* sacrifice, a government may properly engage in larger expenditures (1) the less even is the distribution of income among its citizens and (2) the more progressive is the revenue-raising scheme that it decides to employ.

in § 6. The foundation of the foregoing analysis was the assumption, set out in § 4, that the community is a unitary being for which the government acts as brain. In fact, of course, this is not so. If battleships were goods that people need for individual personal use, that would not, indeed, matter. There could still be the same sort of balancing at the margin between clothes purchased individually and battleships purchased through the government as there is between clothes purchased individually and coal purchased through a co-operative buying agency. But battleships are a collective good, to be used in the general interest by the government. Consequently, any taxpayer's desire to contribute towards buying them is dependent, not only on his desire that the country shall possess them, but also on the number of them which are being made available by the contributions of other people. The government is not, therefore, simply an agent for carrying out on behalf of its citizens their several separate instructions; it cannot simply balance at the margin each man's desire to buy battleships against his desire to buy clothes, in the way that an individual balances his desire for clothes against his desire for coal. As the agent of its citizens collectively, it must exercise coercion upon them individually, securing the

this connection, we assume that the main part of an ordinary man's income (other than the part absorbed in taxation) is used for his own consumption and investment. Obviously, if all rich men were accustomed to give away income to such an extent that, after their gifts, everybody had equal amounts for consumption and saving, we should have a state of things equivalent for practical purposes to one in which all incomes are initially equal.

funds it needs either by a contemporary tax or by a loan associated with a subsequent tax to provide for interest and sinking fund. Where, however, coercion intrudes there are introduced two new elements, of which the method of analysis so far described takes no account. The first of these is the cost of administration. This includes, not merely the costs of the government departments which have to collect and distribute the funds raised from the public, but also the costs thrown on the public themselves in the form of accountants' and solicitors' fees, together with the trouble to which taxpayers are individually put in filling up income tax forms and so on. The second element is less obvious but not less important. The raising of an additional £ of revenue necessitates increasing the rates at which taxation is imposed, either now or (if resort has been had to loans) subsequently, and this inflicts indirect damage on the taxpayers as a body over and above the loss they suffer in actual money payment. Subject to what will be said in later chapters, indirect damage is absent only when—as, for example, with a tax on true rents—no inducement is offered to anybody to act in any way differently from what he is doing. Where there is indirect damage, it ought to be added to the direct loss of satisfaction involved in the withdrawal of the marginal unit of resources by taxation, before this is balanced against the satisfaction yielded by the marginal expenditure. It follows that, in general, expenditure ought not to be carried so far as to make the real yield of the last unit of resources expended by the government equal to the real yield of the last unit left in the hands of the representative citizen. It follows, further, that the extent of the gap which ought to be allowed varies according to the methods available for raising extra funds; being greater where it is necessary to resort to methods that involve large indirect damage than where there is opportunity for comparatively harmless expedients.

PART II
TAX REVENUE

CHAPTER I

PRINCIPLES OF TAXATION

§ 1. IN this Part the quantity of government expenditure, both real and transfer, is taken as given. Such part of it as is met out of fees is ruled out of account, and the device of borrowing, whether from the public or from the banks, is ignored. Moreover, except in Chapter VIII., we are concerned solely with the problem of *raising* revenue, not with the wider problem of *raising and spending* it. In this first preliminary chapter our task is to seek for fundamental principles of policy.

§ 2. (Under any tax system the actual provision of the taxes, the expenditure of the proceeds being left out of account, involves a certain burden of sacrifice upon each taxpayer, and the burdens upon different taxpayers bear certain relations to one another. For a comparison between different tax systems yielding equal revenues from a given community there are thus suggested *prima facie* two criteria of merit : first, the size of the aggregate sacrifice imposed : secondly, the nature of the relations between the several items that make up this aggregate. It must, indeed, be admitted that no test which is centred in sacrifice, in the sense of loss of satisfaction, goes quite to the root of things. For, of equal satisfactions, one may embody more *good* than another : as between a greater and a less sacrifice of satisfaction, the greater may carry the smaller amount of evil. When this happens, it is, of course, the aggregate of good and evil, not the aggregate of satisfaction and dissatisfaction, to which a wise government will look. On this ground defence is sometimes made of special taxation upon the consumption of alcoholic drink. This consideration has

not, however, a wide range of importance. In seeking to construct a standard for comparing the merits of different tax systems I shall ignore it, shall assume that the standard must be built somehow upon sacrifice, and shall canvass only the part to be played in this standard by the amount of aggregate sacrifice and the manner in which this aggregate is distributed among the taxpayers?

§ 3. Some authorities hold that to make the aggregate sacrifice associated with the raising of revenue as small as possible is an ultimate principle: others that to make the sacrifice borne by all the several members of the community equal is an ultimate principle: others that both these principles are ultimate, so that, when they conflict, we are faced with a dilemma irreducible in theory, and in practice to be met only by rough compromise. The business of the present chapter is to investigate these views.

§ 4. (Before that task is attacked, the meaning to be attached to our central concept must be made indubitably clear. By the sacrifice which a tax system imposes upon any individual I mean the difference between the net satisfaction he would have enjoyed had there been no tax system—it will be understood that benefits arising out of the government's expenditure of tax proceeds are here left out of account—and the net satisfaction which, under the aegis of this tax system, he does enjoy.) Even under a system so constructed that the taxation of A has no effect whatever on the satisfaction enjoyed by B, this is not, in general, equivalent to the satisfaction which is, so to speak, carried by the money he actually pays in taxation. The reason is that tax systems may cause taxpayers to work more or less hard, and so to have a larger or smaller income (apart from taxation), than they would otherwise have done: and that the effect of this upon their net satisfaction is not represented in the money paid over in taxation.¹ If we

¹ Thus suppose, for simplicity, that each unit of a given taxpayer's work yields £1. Let a be the number of units of work performed annually before taxation is imposed, $\phi(a)$ the aggregate satisfaction involved in the resulting consumption, and $F(a)$ the aggregate dissatisfaction involved in the work that provides it. Then the taxpayer's net satisfaction $= \phi(a) - F(a)$.

were concerned only with taxes assessed upon the consumption of particular commodities, the point I am making would be more obvious: for it is now a familiar idea that the amount of consumers' surplus (expressed in terms of money) destroyed by taxation may differ widely from the amount of the taxation raised. But a moment's reflection shows that the point is valid over a wider range than this.

§ 5. (In my view there can be no question that, subject to the qualifications set out in § 2, least aggregate sacrifice is an ultimate principle of taxation. The levying of taxes is a part of the functions of government.) Apart from the possible effects of the action of one government upon the subjects of other governments, which, for the present, I ignore, (there is general agreement that all of a government's activity should be regulated with a view to promoting, in the highest possible degree, the welfare of its citizens. This is the touchstone by which the whole of its legal system—and its tax laws are, of course, a part of its legal system—must be judged. The day in which the welfare of one category of citizens could plausibly be ranked above that of another is past.) Nobody would venture to claim now that a smaller amount of welfare accruing, say, to a nobleman should be preferred to a larger amount that might be made to accrue to a peasant. (So far as political theory is concerned, maximum aggregate welfare is everywhere accepted as the right goal of government; and when, as of course often happens, actual governments pursue a different goal, their practice may be more or less plausibly explained away, but is never openly defended. In the special field of taxation this general principle is identical with the principle of *least*

After the imposition of taxation suppose that this taxpayer pays in taxes $£k$, does $(a+h)$ units of work and has a net income (after paying the tax) of $(a+h-k)$ $£$. Then his sacrifice, as I have defined it,

$$= \{\phi(a) - F(a)\} - \{\phi(a+h-k) - F(a+h)\} \quad (1)$$

The amount of satisfaction carried by the money he actually pays over in taxes

$$= \phi(a+h) - \phi(a+h-k) \quad (2)$$

This expression is only equal to expression (1) in the special case in which $h=0$.

sacrifice.) Its validity appears to me to be given directly in intuition.

§ 6. The claim that *equal sacrifice* is an ultimate principle of taxation is more controversial. In Chapter II. of Part I. reference was made to Sidgwick's principle of equity—the principle, namely, that similar and similarly situated persons ought to be treated similarly. In Sidgwick's view this principle is an ultimate one. If that be so, the proposition that equal sacrifices ought to be imposed upon similar and similarly situated persons must be an ultimate principle of taxation. I am not prepared to deny that this is so—that equality in this sense and in this degree is a good in itself. But equal sacrifice among similar and similarly situated persons is an entirely different thing from equal sacrifice among all persons. Is equal sacrifice in this wider sense an ultimate principle of taxation? Anyone who maintains that it is is faced with a serious difficulty. It is possible, no doubt, to wring from the principle of equity the proposition that taxation ought to inflict equal sacrifices upon everybody: but it is also possible to wring from it the proposition that the legal system as a whole, including laws of taxation, ought to be impartial between persons, in the sense of securing to all of them equal net satisfactions. On the basis of Sidgwick's intuition, to say nothing of the claims of equi-proportional sacrifice, there is at least as good a case for taxation that makes net satisfactions equal as for taxation that makes sacrifices equal. Indeed there is a better case. For people's economic well-being depends on the whole system of law, including the laws of property, contract and bequest, and not merely upon the law about taxes. To hold that the law about taxes ought to affect different people's satisfactions equally, while allowing that the rest of the legal system may properly affect them very unequally, seems not a little arbitrary. These considerations do not, it must be conceded, demonstrate anything. They should, however, shake seriously the confidence of anyone who is inclined to assert that a generalised principle of equal sacrifice in taxation is given in intuition. For my own part I hold that intuition makes no deliverance on this matter, and that in fact equal

sacrifice, otherwise than as between similar and similarly situated persons, is not an ultimate principle of taxation.

§ 7. If this be granted, we have one ultimate principle, namely, least sacrifice, whose claim is undisputed: and a second ultimate-principle, equal sacrifice among similar and similarly situated persons, but not among others, whose authenticity is somewhat less secure. If the second of these principles is recognised as well as the first, there is, for analysis, a conflict of ideals. Both the "ultimate" principles must be brought before the tribunal of something more ultimate still, *i.e.* the principle of maximum good, and weights must be assigned to them so proportioned that good as a whole, including the good of equality, shall be made as large as possible. In practice, however, as will appear presently, tax arrangements that conform to the principle of least sacrifice always and necessarily conform also to the principle of equal sacrifice among similar and similarly situated persons. Hence, even if the principle of equal sacrifice between similar and similarly situated persons is a true ultimate principle, since it can be deduced from the principle of least sacrifice, it is not a *necessary* one. Though, therefore, for academic persons there may be a more complex esoteric doctrine, for politicians and men of affairs we may properly assert that least aggregate sacrifice is the one ultimate principle of taxation.

CHAPTER II

TAX SCHEMES AND TAX FORMULAE

1. A TAX scheme addressed to any taxpayer is a list of statements relating quantities of payments required from him to selected objective conditions. Thus a payment may be required if he satisfies the condition of existing; a payment if he satisfies the condition of having red hair; a payment if he satisfies the condition of possessing £ x of income; a payment if he satisfies the condition of expending £ y of income upon beer; a payment if he satisfies the condition of receiving £ z of income from land; a payment if he satisfies the condition of owning w acres of land; and so on. The several statements in the above sense embodied in any tax scheme I call tax formulae; every tax formula being made up of two elements, an object of assessment and a function—the tax function as I shall call it—relating together quantities of this object in the hands of individual taxpayers and quantities of revenue to be raised from them by assessment on it.

§ 2. Theoretically the object of assessment embodied in a tax formula may be anything whatever. In practice, for a great many tax formulae, it is some sum of money; the income that a man derives from work, or from property, or from true rents, or from windfalls, or from the exercise of monopoly power; the income that a man expends upon beer, betting, motor-cars, tea, or any other object; the fortune that a man leaves at death or that another man inherits; and so on. For some tax formulae it is a quantity of stuff, as with specific taxes upon commodities and with taxes per acre on land, whether in general or as employed in particular

occupations. In the special case of a poll-tax, the object of assessment is not a variable quantity, and, therefore, this tax may at first sight seem difficult to class along with the others. The difficulty can be got over, however, in a way to be explained immediately.

§ 3. The tax function, $\phi(x)$, which relates quantity of revenue to be raised from individual taxpayers to quantity of assessable object in their hands, might, so far as *a priori* considerations go, be anything we please. For practical purposes, however, the range of possibility is limited in important ways. This is true of all tax formulae, whatever the object of assessment embodied in them. It can be best illustrated, however, in the special case of a formula in which the object of assessment is income. The following limitations are then apparent. First, no government would accept a tax formula under which the tax levy on a nil income is other than nil. Secondly, no government would accept one in which the *amount* of taxation assessed on a smaller income is greater than the amount assessed on a larger income. These two conditions in combination rule out, it will be noticed, negative levies. Thirdly, no government would accept a tax formula under which the *average rate* of taxation increased for some increases in the amount of income and decreased for other increases, i.e. was progressive for some scales of income and regressive for others. Fourthly, no government would accept a formula which imposed on any income a levy greater than the amount of that income. If we write the tax formula $R = \psi(x)$, where R is the revenue required from a taxpayer, and x the amount of his income, these conditions will be expressed thus :

$$(1) \psi(0) = 0.$$

$$(2) \psi'(x) \text{ is positive (or zero) for all values of } x.$$

$$\frac{d\psi(x)}{dx}$$

$$(3) \text{ If } \frac{x}{\psi(x)} \text{ is positive for some values of } x, \text{ it cannot be}$$

negative for any values of x ; and *vice versa*.

$$(4) \psi(x) \leq x \text{ for all values of } x.$$

Among the functions which these rules allow a very important one is the proportionate tax, in which $\psi'(x)$ is

constant, so that $\psi(x)$ can be written kx . Another important form is that in which the *average* rate of tax per unit of assessable object increases as the quantity of this object grows, but at a rate of increase, which, after a point,

approaches to or reaches 0. That is to say, $\frac{d^2\psi x}{dx^2}$ is positive for all values of x up to a point, thereafter approximating to zero. The problem of classifying a poll-tax also finds a solution. This tax may be described, with a certain straining of our meaning, as a limiting type of income-tax. The formula $R=\psi(x)$ correctly describes it when ψ is such that $\psi(x)$ is constant for all values of x greater than A (the minimum income) and is less than A .

§ 4. All tax formulae, the excluded no less than the included group, can be classed, so to speak, into families. Thus, consider two formulae, $R=\psi(x)$ and $R=\phi(x)$. These formulae may be said to belong to the same family if, when m is any constant, $\psi(x)=m\phi(x)$ for all values of x . In other words, two formulae belong to the same family when the revenue raised under one of them is some (the same) multiple of that raised under the other for all scales of income. Thus all proportionate taxes, whatever their rate, belong to the same family; all poll-taxes, whatever their amount, belong to the same family; all taxes represented by the equation $R=a\left\{\frac{x^2}{5000}-20\right\}$, $R=b\left\{\frac{x^2}{5000}-20\right\}$ and so on belong to the same family. On the other hand, all proportionate taxes belong to different families from all progressive and from all regressive taxes; and, in general, any tax represented by the equation $R=\psi(x)$ belongs to a different family from one represented by $R=\phi(x)$, except, as indicated above, when $\psi(x)$ is equal to $\phi(x)$ multiplied by some (the same) constant for all values of x .¹

¹ Some readers may find it convenient to develop this classification of tax formulae further. We describe the members of one family by equations $R=a\psi_1(x)$, $R=b\psi_1(x)$ and so on; and members of another family by $R=a\psi_2(x)$, $R=b\psi_2(x)$ and so on; and we arrange our notation in such wise that, for some one value of x , $\psi_1(x)$, $\psi_2(x)$ and so on are all equal. The choice of the value of x for which this equality shall prevail and of the

§ 5. No comment is required at this stage upon the families of poll-taxes and of proportionate taxes. But of the others something further may conveniently be said here. Consider the tax formula $R = a\psi(x)$. The *average rate of tax* imposed on an income x is measured by $\frac{a\psi(x)}{x}$: and the

marginal tax imposed on an income x (i.e. the rate at which the aggregate tax levy increases as x increases) is measured by $a\psi'(x)$. When a tax formula is said to be *progressive*,

the meaning may be *either* that $\frac{a\psi(x)}{x}$ increases as x increases or that $a\psi'(x)$ increases as x increases. The former meaning

signifies that $\frac{d}{dx} \frac{a\psi(x)}{x}$ is positive, the latter that $a\psi''(x)$ is

value which $\psi_1(x)$ and so on shall then have is, of course, quite arbitrary. Let us postulate, therefore, that, when $x = 1000$, $\psi_1(x)$ and so on shall all be equal to 10. This is convenient because it implies that, given this value of x , $\frac{\psi_1(x)}{x}$, $\frac{\psi_2(x)}{x}$ and so on $= \frac{1}{100}$: in other words, that the *rate of tax* is

one per cent. On this basis every possible tax formula can be expressed by an equation of the form $R = m\psi(x)$, provided only that the formula imposes *some* levy on incomes of £1000: and for every possible tax formula the *rate of tax per cent* imposed on incomes of £1000 is equal to m . If we name m the tax constant and $\psi(x)$ the tax function, all members of one family will have the same tax function but different tax constants. To illustrate this method of classification, let us write t for the rate per cent

of any tax, so that the formula $R = m\psi(x)$ is equivalent to $\frac{t}{100} = \frac{m\psi(x)}{x}$ or $t = 100 \frac{m\psi(x)}{x}$. Then for all taxes under which the levy made is

proportionate to income $\frac{\psi(x)}{x} = \text{a constant} = \frac{1}{100}$, so that $t = m$; that is to say, the *percentage rate* of tax is equal to the tax constant, as I have defined it. Again, for lump-sum taxes, i.e. a poll-tax, $m\psi(x)$ is a constant,

and, therefore, since, when $x = 1000$, $\frac{\psi(x)}{x} = \frac{1}{100}$, $\psi(x) = 10$ for all values of x .

The formula, therefore, becomes $R = 10m$; and the *amount* of the tax is equal to ten times the tax constant. Yet again, suppose that the tax formula embodies a particular sort of progression, in such wise that the revenue is always equal to $\frac{1}{10000}$ th part of the square of the income (up to the point at which it becomes equal to the income). In my notation the

tax constant in this formula is 20, and the tax function $\frac{x^2}{100000}$. If the formula of the tax had been $R = \frac{1}{10000}x^2$, the tax constant would have been 10 and the tax function the same as before. I do not suppose, however, that many persons will find this elaboration worth while.

positive. If we were including in our purview tax formulae in which the average rate of tax increased for some increases of x and decreased for others, we should find that some of them, in respect of certain values of x , were progressive in one of the two senses distinguished above but not in the other. When, however, mixed formulae of the type described are excluded, it can be shown that all of those remaining, if progressive in the one sense, must be progressive in the other also. For

$$d \frac{a\psi(x)}{x} = a \left\{ \frac{1}{x} \psi'(x) - \frac{1}{x^2} \psi(x) \right\}.$$

This is positive for all values of x , if $x\psi'(x) > \psi(x)$ for all values of x , i.e. if $\psi''(x)$ is positive for all values of x : which proves the above proposition.

§ 6. The preceding analysis shows further, that, for all formulae included in our review, if one member of any tax family is progressive, all must be progressive; and, if one is regressive, all must be regressive. Thus every tax family can be described unambiguously as progressive, proportionate or regressive. When, however, we come to consider *degrees* of progression or regression, the matter is not so simple. These degrees may be taken to refer to progression or regression either in average rates of tax or in marginal rates. In the former sense the degree of progression, in respect of income x , of the tax formula $R = a\psi(x)$ is measured by

$$a \frac{d\psi(x)}{dx} = a \left\{ \frac{1}{x} \psi'(x) - \frac{1}{x^2} \psi(x) \right\}; \text{ in the latter sense by } a\psi''(x).$$

Though, as was shown in the preceding section, these two expressions are necessarily of the same sign, they only bear a constant relation to one another in the special case in which the degree of progression or regression in the second sense is the same for all values of x .¹ It is, therefore, necessary to choose one or other of the two forms. I

¹ In that case, since (from § 3) we know that $\psi(0)$ and $\psi'(0)$ both = 0, the expression $a \left\{ \frac{1}{x} \psi'(x) - \frac{1}{x^2} \psi(x) \right\}$ is easily shown to be equal to $\frac{1}{2} a\psi''(x)$.

choose the second, and shall measure the degree of progression or regression of a tax formula in respect of an income x by $\psi''(x)$.

§ 7. Attention has so far been confined to the structure of the tax scheme addressed to a particular taxpayer. We have now to take a wider view. It is possible to imagine an arrangement under which different members of the community are subjected to different tax schemes, to each one a special tax scheme of his own. Thus, to A, who is, perhaps, now earning £1000, it might be announced that, if he earns £900, he shall be taxed 9 per cent, if he earns £1000, 10 per cent, if he earns £1100, 11 per cent: while to B, now earning £1100, it is announced that, if he earns £900 he shall be taxed 20 per cent, if £1000, 21 per cent, if £1100, 22 per cent, and so on. In like manner A might be assessed at a poll-tax of £1000 and B at one of £100, A at a tax of 20 per cent of his expenditure upon beer, B at one of 40 per cent. In the modern world, however, no arrangement of this kind has ever been found, nor could any such be worked. The opportunities which it would offer for tyranny, vindictiveness and personal favouritism rule it out of court. To obviate abuses taxes must be assessed under some machinery of general rules based on *objective* standards. Hence, each item in a tax scheme must embody one and the same announcement to every taxpayer. It must say to each, for example: "If you or *anybody else* are a married man with one child and have such and such an income, you must pay so much". If one man A is told that he will be taxed 11 per cent, 10 per cent, or 9 per cent, according as he earns £1100, £1000, or £900, everybody else in a similar position must be told the same. If a poll-tax is imposed, conditional on existence, of, say, £100, *everybody* must pay that sum, whatever his wealth. If a tax of £5 per acre is imposed on land, *every* holder of 100 acres must pay £500, though one holder may be a millionaire, another relatively poor. If a 10 per cent tax on tea-drinking is imposed, two men of equal income, one of whom likes tea while the other dislikes it, must pay different amounts of tax. This obligation, under which governments lie, to put forward the same

scheme of taxation for all persons whose relevant circumstances are alike has an important consequence. If they were not tied by this condition, any given revenue could be raised with a smaller aggregate sacrifice than the smallest which can be inflicted now. The ideal of least sacrifice has, in short, to be pursued subject to a handicap. We seek least sacrifice, not in an absolute sense, but relative to the condition that a single (the same) tax scheme shall be presented to every citizen.

CHAPTER III

THE INTERACTION OF DIFFERENT TAX FORMULAE

§ 1. WHEN a tax scheme consists of more than one tax formula, the revenue yielded by it is not, in general, equal to the sum of the revenues which would have been yielded by each tax formula, had it been imposed by itself. The relations involved being somewhat complex, I propose in the following paragraphs to analyse them briefly.

§ 2. First, when a given revenue is being collected and used up by the government—not merely retransferred, *e.g.* in interest, to the public¹—the fact that this quantity of revenue is being raised, irrespective of the manner of its raising and so of its announcement effects, is liable to modify the yield of further taxes, if such are imposed. *Some* sorts of further taxes are, indeed, unaffected. Thus a poll-tax, or a tax of so much per acre on all land, or a tax proportionate to true rents, will yield the same revenue whether much or little revenue is being raised contemporaneously in other ways. Again, the yield of taxes on earned income will not be affected; for they are normally assessed on income reckoned prior to any payments made out of it to meet other taxes, so that these payments do not directly affect the magnitude of the assessed object. On the other hand, any ordinary commodity tax will yield less revenue when the taxpayers are than when they are not impoverished by other taxation. So will taxes on investment income and death duties, because impoverish-

¹ Even if the money is retransferred to the public, we are not secure against consequences of the type discussed in this paragraph, unless it is retransferred to different taxpayers in proportion to their tax payments.

ment will lessen capital accumulations. Hence, the raising of money by one set of taxes—always presuming that the money is employed for using-up purposes—commits ravages of greater or less extent upon the yield of certain other taxes. Yet again, in a very poor country, a tax on bread may yield *more* if there are than if there are not heavy other taxes, because people may be forced down to bread in substitution for more expensive foods.

§ 3. Secondly, the extent to which the yield of new taxes is affected by the existing tax system depends, not only on the amount of the revenue that is being raised under that system, but also on the way in which the levies made under it are distributed among different income groups. Thus, if the existing tax system is made up of taxes which strike predominantly rich people—if, for example, its main constituent is a steeply graduated income tax—there will be left over less money in their hands, and more in the hands of poor people, than would have been so left if the existing tax system had consisted mainly of duties upon staple articles of general consumption. It follows that a new tax at a given rate impinging mainly on the rich will yield less additional revenue in the former case than in the latter; while, *per contra*, a new tax at a given rate impinging mainly on the poor will yield more additional revenue. Thus, to put the same point from another angle, when the amount of additional revenue required is given, in case (1) a champagne tax would have to be at a higher rate and a death duty formula of given steepness would have to be on a higher scale¹ than in case (2); and, *per contra*, a tax on beer would have to be at a lower rate.

§ 4. Thirdly, when the amount of revenue being raised and the distribution of the burden under it are both given, the yield of further taxes is liable to be modified by the *nature* of the existing taxes, and to be modified in different ways according to what the further taxes are. Thus, if the main body of the revenue—of *given amount*—is being raised by a poll-tax, an income tax conforming to a given formula

¹ In the language of Chapter II. § 4, footnote, the tax constant would have to be larger.

will yield more revenue than it would do if the given amount of revenue were being raised through a number of commodity taxes. For the poll-tax, while causing the marginal utility of money to persons mulcted under it to rise in the same way that commodity taxes yielding equal revenue would do, differs from these taxes in that it threatens no additional levy on these persons, if, to compensate themselves, they do more work, and so obtain and spend more income. Consequently, where the rest of the tax system consists of a poll-tax, there will be more income available for assessment under income tax, and so a bigger yield from any given scheme of income tax, than there would be if the rest of the system consisted of commodity taxes. On similar lines it can be shown that, if the rest of the tax system consists of a poll-tax, any (ordinary) commodity tax will yield more revenue than it would do if the rest of the system consisted of an income tax. Again, if there exists in the rest of the tax system a tax on one of two rival commodities (say beef), a new tax at a like rate on the other rival (say mutton) will yield much more revenue than if the revenue actually being collected from beef were being raised in some other way. *Per contra*, if there exists in the rest of the tax system a tax on one of two complements (say tea or malt), a new tax on the other complement (sugar or hops) will yield much less revenue than it would have yielded otherwise. The matter is still further complicated by the mutual character of some of these reactions. Thus, if a tax on beef already exists, the imposition of a new tax on mutton will cause the yield of that tax to increase; while the imposition of a new tax on sugar or hops will cause the yield of an existing tax on tea or malt to decrease. Therefore the addition to aggregate revenue due to the new tax is not equal to the yield of the new tax; and the relation between these two things may differ for different new taxes in different ways depending on the structure of the other parts of the tax system.

§ 5. In the light of these considerations it is obvious that, when a given amount of additional revenue is required, we shall often be unable to tell what member of any given

family of tax formulae—or, to take a simple special case, what rate of one or another sort of tax—would yield that revenue, until we know, both what amount of revenue is already being raised, and also what tax formulae are being employed to raise it.

CHAPTER IV

THE PRINCIPLE OF LEAST SACRIFICE AND THE DISTRIBUTIONAL ASPECT OF TAXATION

§ 1. WHEN revenue is raised in any country, the total of it is always made up of parts taken from a number of different individuals in varying economic situations. There are, therefore, two factors upon which, when the amount of the revenue to be raised is settled, the aggregate sacrifice involved in raising it depends. These are, on the one hand, the way in which the several parts of the total money impost are *distributed* among people in different economic situations, i.e. different degrees of wealth, and so on ; and, on the other hand, the scheme of formulae in which their own particular liability is *announced* to each several taxpayer. In a subsequent chapter the complicated interrelations between these two aspects of taxation will be examined in detail. In this chapter I shall inquire to what distribution of tax levies the principle of least sacrifice would lead if we were free to ignore altogether announcement aspects. Before we set out on our task, however, it is necessary to be clear as to what precisely we mean by ignoring announcement aspects. The announcement of a tax as a rule causes people to modify their conduct with a view, in some measure, to avoiding the pressure of the tax. Thus, if beer is subjected to a duty, they are likely to buy less beer. Hence, it is natural to say in a loose way that, when we rule out the announcement aspects of taxation, we are supposing that it does not cause people to modify their conduct. That, however, would be an absurd supposition. If a man, who, apart from taxation, would have an income of £2000, is

compelled to pay £500 to the government, and the government does not return it, that man *must* modify his conduct. When I rule out the announcement aspects of taxation, I assume that this £2000 man, mulcted of £500, acts in the same way, not as he would have acted if he had not been mulcted, but as a £1500 man of like temperament not subject to taxes would act. That is to say, he will now (1) have a net income of £1500 and (2) use it in the same way as he would have done had that been his gross income not subject to any tax. He will distribute it over different sorts of purchases, not in the proportions in which he would have distributed his original £2000 had it remained intact—he would certainly have spent a bigger fraction of this on luxuries of elastic demand and a less fraction on such things as food and house-room—but in the proportions in which an untaxed £1500 man of the same temperament as himself would distribute his income. It is this precisely, and nothing other than this, that we have to suppose if we wish to rule out of consideration the announcement aspects of taxation, while including all the distributional aspects.

§ 2. The problem of tax distribution has not, of course, to do with particular taxes viewed in isolation. The principle of least sacrifice requires that the *whole body* of tax levies shall be distributed in a certain way, and, failing *optimum* distribution, it informs us that one kind of distribution inferior to the *optimum* is, nevertheless, superior to another kind. If the rest of the tax system is settled and we have to decide by what means to raise a given amount of additional revenue, our choice must depend, not on how the burden of the new tax will be distributed, but on how that of the new tax and the old taxes together will be distributed. This depends on the nature of the old taxes as well as on the nature of the new one. New tax A will conform better to the principle of least sacrifice than new B if these old taxes are of one sort, but new tax B will conform better if they are of another sort. For example, if X and Y are persons in all respects similar, a particular tax ought to strike them both equally if the rest of the tax system strikes them equally; but, if the rest of the tax system strikes X more severely

than Y, the particular tax, to redress the balance, ought to strike Y more severely than X. As Marshall writes: "Onerous taxes, imperial and local, must be treated as a whole. Almost every onerous tax taken by itself presses with undue weight on some class or other; but this is of no moment if the inequalities of each are compensated by those of others, and variations in the several parts synchronise. If that difficult condition is satisfied, the system may be equitable, though any one part of it regarded alone would be inequitable."¹

§ 3. (So much being understood, we may conveniently begin our discussion by assuming that all the sacrifice due to taxation is direct immediate sacrifice to the taxpayers concerned, and that there are no indirect sacrifices arising in the future to be taken into account.) This assumption being held in mind for later reference, we may note that Mill, in his discussion of tax distribution, fell, or at least gave the appearance of falling, into a serious error. He wrote: "Whatever sacrifices it (a government) requires from them (classes of persons) should be made to bear as nearly as possible with the same pressure upon all; *which, it must be observed, is the mode by which least sacrifice is occasioned to the whole*."² It is possible that in this passage Mill was taking into account something more than distributional consequences; though I do not think that this is so. In any event, whatever interpretation we may give to his pronouncement, the truth is that, when distributional aspects are alone in question, least aggregate sacrifice will *not* be promoted by a system inflicting equal sacrifice all round. This is very easily seen. For, if the abstraction of £1000 from an income of £10,000 inflicts the same sacrifice as the abstraction of £100 from an income of £1000, then the abstraction of £1100 from a £10,000 income *must* inflict less aggregate sacrifice than the abstraction of £1000 from that income *plus* the abstraction of £100 from the £1000 income. In order to secure least aggregate sacrifice taxes should be so distributed that the marginal utility of the money paid

¹ Marshall, *Memorandum on Imperial and Local Taxes* [C.—9528], p. 113.

² *Political Economy*, Book v. ch. ii. § 2, par. 1. The italics are mine.

in taxation is equal to all the payers. If the utility of the last penny paid by A were less than that of the last paid by B, a reduction of sacrifice could be secured by transferring a part of B's assessment to the shoulders of A. Thus, the distribution of taxation required to conform to the principle of least aggregate sacrifice is that which makes the *marginal*—not the total—*sacrifices* borne by all the members of the community equal.

§ 4. If we push further towards the concrete, it appears that a system of equi-marginal sacrifice fully carried out would involve lopping off the tops of all incomes above the minimum income and leaving everybody, after taxation, with equal incomes. If the amount of revenue required is not enough to absorb the whole of the surpluses above the minimum—if, in Edgeworth's words, there is not enough taxation to go round—the logical procedure would be first to take for the government's needs the tops of the highest incomes, and then to continue taxing middle grade incomes and giving bounties from the proceeds to the smallest incomes till a dead level of equality is attained. If this latter procedure is ruled out and we are only allowed to impose taxes up to the amount of the revenue required for the government's needs, this revenue should be collected exclusively from the highest incomes, these being all reduced in the process to the level of the highest untaxed income. Of course, in so far as tastes and temperaments differ, allowance ought, in strictness, to be made for this fact; if, for instance, A is so sensitive that he could obtain from the 5000th £ of a £5000 income as much satisfaction as B could obtain from the 1000th £ of a £1000 one, there would be no ground for taking money from A rather than from B. But, since it is impossible in practice to take account of variations between different people's capacity for enjoyment, this consideration must be ignored, and the assumption made, for want of a better, that temperamentally all taxpayers are alike. On that assumption, the procedure sketched out above is what the canon of equimarginal sacrifice dictates. Obviously, such a system implies that, as between men in different economic situations,

both aggregate and proportionate sacrifice will increase very rapidly as we move up the scale of economic situations or, more specifically, of incomes.

§ 5. (The result thus attained appears at first sight to be complete and conclusive, so long as attention is restricted to the distributional aspects of taxation and announcement aspects are ruled out of account. It is, however, in fact, subject to a very important qualification. For the assumption set out at the beginning of § 3, to the effect that the only sacrifices which result from taxation, and have, therefore, to be reckoned with, are contemporary sacrifices, is invalid! Sacrifices may also occur which are of an indirect sort and impinge upon the future, maybe upon persons who were not yet born at the time the taxes were levied. It would, no doubt, be possible, by artifices of definition, to bring these future sacrifices into account without modifying the formula of equi-marginal sacrifice as set out above. (It is, however, more convenient to say that, when there are no relevant future sacrifices, the principle of least sacrifice requires equi-marginal *contemporary* sacrifice, and that, when there are relevant future sacrifices, some modifications in that arrangement are required. Let us examine these in detail)

§ 6. (The chief of them may be set out as follows. It is tolerably well known that the proportion of their incomes which very poor people devote to saving, as against consumption, is, as indeed it must be, very small, and that, as we advance up the scale of incomes, the proportion saved becomes larger; the great bulk of the new savings annually accomplished in this country being, in fact, apart from savings through the accumulation of reserves by joint-stock companies, due to very rich and rich persons. It follows that, even though people, when taxed, distributed the money left to them among different uses in the same proportions as before, the collection of a given revenue would cut down savings more, the more largely the taxes levied to produce that revenue were concentrated upon the upper strata of incomes. Moreover, as was observed in § 1, as a matter of fact people, when taxed, do not distribute their cuts in equal proportions among all ways of employing money. They make

[larger cuts in uses where their demand is elastic than in uses where it is inelastic. (There is, however, reason to believe that the demand for saving is, for many, if not for all people, highly elastic. They save what is left over after their normal standard of life, a fairly rigid thing, has been satisfied. It follows that, when taxation is concentrated upon the higher strata of incomes, the cut in savings will be even larger than a calculation based on the comparative proportions in which different classes save suggests.¹ This means that taxation can only be distributed in accordance with the formula of equi-marginal contemporary sacrifice at the cost of greatly contracting the annual volume of new savings, and so the annual accumulation of new capital instruments.]

§ 7. It may, perhaps, be objected that the step taken in the last sentence from savings to capital instruments is not always warranted. When a person invests £500 in setting workmen to build a mill or to manufacture machinery, nobody doubts that, apart from errors and miscalculations, he is making a real and effective saving and adding £500 worth to the capital accumulations of the country. But, when a person buys £500 worth of existing railway stock from another Englishman—we need not trouble here about foreign investments—some people find a difficulty in understanding what is happening; for they perceive that this purchase does not directly and in itself affect the real capital equipment of the country in any degree. The solution of the puzzle is, however, simple. If I devote £500 of income to buying existing railway stock, the seller of the stock receives

¹ In applying these general considerations to the special case of Great Britain it is essential to bear in mind that a very large part of the country's annual savings—perhaps some 160 millions net (after tax payment) out of a total of 450 millions—is provided through additions made by joint-stock companies to their reserves out of undistributed profits, which are subject to the standard rate of income tax, but not to super-tax. Income tax necessarily absorbs a large part (at 4s. in the £, one-fifth) of the gross income turned into these reserves. But the Colwyn Committee found that, in spite of this, reserves have been well maintained since the war (p. 19). The Committee concluded that "the tax has had a considerable effect in inducing companies to withhold larger gross amounts from distribution" (p. 149)—in other words, to compel their shareholders to meet a substantial part of the tax drain made upon their resources by new savings.

my £500. He *may*, of course, spend the money as income and thus perform negative saving. But neither his opportunity nor his desire for negative saving is appreciably increased by my action. Though, therefore, the aggregate of new capital accumulation in any year is not equal to the aggregate of new saving, because some of this is set off by negative saving, the *effect* on the aggregate of new capital accumulation produced by my decision to save £500 is measured by that £500. If I did not buy, the seller of railway stock would still sell, and so divert to providing for his negative saving positive savings which somebody else was making and which my action in buying enables to pass instead, at one or more removes, into the service of those who wish to set workpeople to work in making machinery and other equipment. Thus, whatever immediate form my saving assumes, it *implies*—apart from foreign investment, accumulations of unspent bank balances, and, of course, blundering waste—an equivalent addition to the real capital establishment of the country.

§ 8. Returning from this digression, (we have next to observe that a check to the annual creation of new capital means that those who in the future will work in conjunction with capital instruments will, their numbers being given, obtain less real earnings than they otherwise would have done, and so will suffer a sacrifice. If we suppose that their numbers are going to increase in a given measure, the check imposed on capital accumulation may force them to accept lower real rates of pay, whereas, had there been no check, their earnings rate might have been sustained in spite of growing numbers. This class of effect does not enter into the consideration of a person whose income is contracted by taxation.) The cut that he makes in his savings, unlike that which he makes in his purchase of carriage horses, thus involves a by-product of extra sacrifice to other people, unconsidered but obviously not irrelevant to aggregate sacrifice conceived in the widest sense. Apart, therefore, from accompanying State action designed to counteract the effects which a concentration of taxation upon rich people must have upon capital accumulation, it appears that the principle of least sacrifice points to a system somewhat more

merciful to the rich than the canon of equi-marginal contemporary sacrifice would commend.¹

§ 9. Alongside of this consideration must be set another, which analytically is of like character. Up to a point every £'s worth of any man's purchases of certain sorts of commodities, besides yielding directly satisfaction commensurate with his desire for it, also yields a by-product. This by-product is his own, and perhaps his children's, increased productive efficiency² and the satisfaction which the increased output due to this increased efficiency will yield later on. If, in consequence of taxation, his consumption is cut down in such wise that his or his children's efficiency is reduced, the loss of satisfaction to him and them, i.e. the ultimate and total sacrifice imposed, is larger than the immediate sacrifice. Moreover, it should be noted, the mere fact of a man spending part of his income on things that do not promote efficiency—"conventional necessities," and so on—is no proof that cuts in his income, if such are forced upon him, will be made in ways innocuous to efficiency. There will be room for making them in these ways, but a man may easily prefer to hold on to conventional necessities even at the expense of doing without real necessities. It should be noted further that the quantity of consumption, cuts below which damage efficiency, is not the same for persons in all walks of life. It may well be that a navy's efficiency will be as large with an expenditure of £200 a year as with any larger expenditure, while that of a philosopher, who needs quiet and mental stimulus, would be reduced if his expenditure had

✓ ¹ The essence of the foregoing argument can be brought out in an abstract illustration. Suppose that a community consists of two persons, one normally earning a small income and the other a large income, that the latter is responsible for all capital accumulations, and that both live for ever. Then the aggregate satisfaction of the poor man, looked at *sub specie æternitatis*, is a function, not only of the money income left, after taxation, to himself, but also of that left to the rich man. Therefore, to maximise satisfaction in the aggregate, we do not require a tax distribution such that the last £ taken from the poor man imposes on him a sacrifice equal to that which the last £ taken from the rich man imposes upon the rich man. It must impose a sacrifice equal to that which the last £ taken from the rich man imposes on the rich man *plus* that which the last £ taken from the rich man imposes indirectly on the poor man.

² Cf. *ante*, Part I. Ch. IV. § 7.

to be cut down from £1000 to £900. These, however, are secondary matters. The main point is that, when taxation cuts down net incomes, and so net expenditures, among people with small incomes, but not when it cuts down the expenditures of moderately well-to-do or rich persons, there is involved an indirect element of sacrifice additional to the direct sacrifice; with which alone §§ 3-4 were concerned.

§ 10. This result and that attained in § 8 in some measure cancel one another. The discussion of §§ 3-4 neglected, on the one side an important element of sacrifice associated with the taxation of large incomes, on the other an important element associated with the taxation of small incomes. Plainly in any final judgement both these neglected elements ought to be taken into account. When they are combined, the net result is that both poor people and rich people are less satisfactory subjects of taxation than they appear to be at first sight. The scale is tipped against the unfortunate intermediate class of moderately well-to-do persons.¹

¹ What has been said here does not, and is not intended to, throw light on the way in which the volume of saving is affected by the collection together with the expenditure of revenue. Our argument, as was premised in Chapter I. § 1, has assumed the expenditure and has been concerned with comparing different ways of raising the money required. Since, however, the other problem has sometimes given rise to confusion, it may be well to add a brief note upon it. Announcement effects, it will be understood, are left out of account, so that no notice is taken either of changes that may take place in savings through alterations in the quantity of work done, or of changes in this latter quantity which may take place in consequence of any differentiation that may be made against work.

At the outset it is essential to distinguish between the effects of government action in raising and spending money in certain ways and the effects of the causes which may make this action necessary. Plainly, the fact that resources, which might have been devoted in the past to building up productive equipment and so to making the real income of the community now larger than it is, were devoted instead to destruction in war, causes less savings to be made now than would have been made had there been no war. This is so irrespective of the manner in which the war was financed and of its aftermath in government debt (cf. Part I. Chapter III. § 4).

So much being understood and what has happened in the past being taken as given, it is plain that the effects upon the volume of annual savings produced by the raising and spending of money by government depends upon the detailed nature of the transactions carried through. Let us consider first the raising of money for real government expenditure of a sort not devoted to the building up of capital equipment, e.g. the ordinary running expenses of the civil administration and defensive forces. In accordance with the argument of the text, it is easy to see that savings

will be depleted more largely, the more the levy is concentrated upon rich people, subject to the qualification that resources devoted to consumption by very poor people are, from a productive point of view, equivalent to savings. In so far as the real expenditure of government is devoted to building up capital equipment, the aggregate reduction of savings is, of course, *pro tanto* diminished.

Turning next to the raising of money for transfer purposes, we have to set against the check to savings, which the raising of the money brings about on the part of the persons from whom it is taken, the extra power to save which is conferred upon those to whom the transfer is made.⁶ Of transfers to war pensioners and old age pensioners it is improbable that any substantial part is devoted to saving. Of transfers in payment of interest to domestic holders of war loan a considerable amount is likely to be saved. In view of the fact that a large part of war loan is held by banks, insurance companies, joint-stock companies, and so on, while the holders of the bulk of the remainder are well-to-do persons, it may well be that the savings made out of the money transferred by the recipients actually exceed the savings which would have been made out of it by the original holders, had it been left in their hands. (Cf. *The Report of the Committee on National Debt and Taxation*, p. 99.) Transfers in repayment of the principal of their debt to domestic holders of war loan are practically certain to involve a net increase of savings: for, while substantially the whole of the repaid principal will be reinvested by the recipients, some of the money raised in order to provide for the repayment is sure to have been taken from consumption.

CHAPTER V

THE PRINCIPLE OF LEAST SACRIFICE AND TAX ANNOUNCEMENTS TO EQUAL-INCOME GROUPS

§ 1. IN this chapter I propose to ignore distributional considerations in the same way that in the preceding chapter I ignored the varying effects of announcing their liability to taxpayers through different tax formulae. To this end it is necessary to make the highly unreal assumption that we have to do with an income group, all of whose members are exactly alike, not only in temperament, family estate and so on, but also in the amount of income which they respectively enjoy. On this basis we have to study the different amounts of sacrifice which are involved when a given revenue is raised by means of one or another sort of tax announcement. To simplify the discussion, I assume that the whole revenue is to be collected under a single tax formula, in which the object of assessment is income earned by work.

§ 2. When a given revenue is being raised in these conditions, and when the functions relating quantity of income to the satisfaction derived from it and to the dissatisfaction involved in obtaining it are given, the aggregate sacrifice involved will be smaller, distributional considerations apart, the more the volume of work, and so of income, is caused to increase, or the less it is caused to diminish. To show this, let us begin by supposing that the resources absorbed by the government are *used up* by it. Then, since income is taken away from taxpayers, the marginal utility of money to them is raised,¹ but the marginal dis-

¹ In so far as tax revenue is used up by a government in providing people with things (*e.g.* elementary education) on which, or on substitutes

utility of work is unchanged. Hence, unless they are somehow impeded, they will increase the amount of work done, and so of income obtained, up to the point at which the marginal utility of income and the marginal disutility of the work done to secure it again become equal—which is obviously the *optimum* position. If tax formulae were admitted under which the aggregate revenue raised decreased as income increased (*i.e.* under which $\psi'(x)$ was negative for relevant values of x), we should, indeed, have to note that, with these formulae, people would be stimulated to push work beyond this *optimum* position; so that it would not be true to say that larger expansions of work are always associated with smaller aggregate sacrifice. Tax formulae of that kind have, however, been ruled out, so that the proposition set out in the first sentence of this section needs no qualification. If the resources collected by government in taxation are not used up by it but are transferred back to taxpayers, *e.g.* as interest due to them in their capacity as holders of war loan, and we desire to take account of that fact, the appropriate analysis is slightly different. This combined process cannot in any circumstances cause the quantity of work that is done to increase; for, since what is taken from the representative man is simultaneously returned to him, the marginal utility of money to him is not affected. The *optimum* arrangement, therefore, is not one under which work is increased in a certain measure, but one in which it is unaltered in amount. For this case, therefore, it is no longer necessary to contemplate possible increases of work; and our conclusion becomes that, when a given revenue has to be raised, the aggregate sacrifice involved will be less, the less the volume of work is caused to diminish.

§ 3. When the revenue that is required is the maximum which it is possible to raise from a given group (all of whose

for which, they would otherwise have spent the money now handed over in taxes, the marginal utility of money to them is, of course, not raised. But, as will have been gathered from Part I. Chapter VI., the main part of a government's real expenditure out of tax revenue is likely to be devoted to things—national defence and so on—which, if it had not provided them, would not have been provided at all.

members are similar and enjoy equal incomes) through any member of a given family of tax formulae, it is unlikely that there will be more than one member of the family capable of yielding that revenue. For the family of proportionate taxes it is impossible that there should be more than one member—in this case more than one rate of tax—which is thus capable. For the family of lump-sum taxes or poll-taxes the same thing is true; and it is also true of many other families of tax formulae. There will, indeed, in a complete theoretical inventory, be some families of which it is not true. This, however, is a refinement. Practically speaking, we may say that the maximum revenue possible of attainment by any member of a family of tax formulae is attainable by only one member of that family. When the revenue that is required is less than the maximum which it is possible to raise through any member of a tax family, this is no longer true. For the family of poll-taxes there is still only one member that will yield this revenue. But for the family of proportionate taxes there are always two members. Any revenue, other than the highest revenue obtainable through any proportionate tax, can be secured either by a rate of tax lower than the maximum-revenue rate or by a rate of tax higher than this. There is a choice, in fact, between a relatively low rate of tax collected from a relatively large income—which comes into being just because the rate is low—and a relatively high rate collected from a relatively small income. For other families of tax formulae the same thing is true in general. Thus, let us describe the members of a family by equations in which R is equal respectively to $a_1\psi(x)$, $a_2\psi(x)$. . . $a_m\psi(x)$, $a_{m+1}\psi(x)$ and so on, where an a with a larger suffix is always greater than one with a smaller suffix, and where $R=a_m\psi(x)$ is the equation of that member of the family which yields maximum revenue. Then any revenue other than the maximum will, in general, be yielded both by some member which precedes the maximum-revenue member in the order set out above and by some member which succeeds that member. For some families of tax formulae certain revenues other than the maximum will be yielded by more than two members. It is easy

to see that, when a given revenue can be obtained from two or more members of a given family of tax formulae, work will be diminished less and, therefore, in accordance with the preceding argument, a smaller aggregate sacrifice will be suffered, if, so to speak, the *lowest in rank* of these members is chosen. For the family of proportionate taxes this, of course, means that the lower rate of tax capable of yielding a given revenue should be chosen in preference to the higher rate. For other families it means that, their members being arranged in an order of the kind illustrated above, a member in which the suffix of a is smaller should be chosen in preference to one in which it is larger. In what follows, therefore, when I speak of the tax formula belonging to any family that will yield a given revenue, I shall always mean, where two or more members will do this, the lowest in rank among them.

§ 4. When any given revenue has to be raised, our main problem then lies, not within different tax families, but between the appropriate representatives, or strongest candidates, from different families. This being so, it is important to observe that candidates from all families will not always be available. When the revenue required is very small, relatively to the income which the community would have in the absence of taxation, few families will be without a potential representative. But, as the revenue required becomes larger, more and more families are forced to withdraw, because the revenue which their strongest representative could raise is less than what is needed. It is possible in theory to arrange the different families in an order according to the maximum revenue which the strongest member of each can yield. Thus, if the revenue required exceeds a certain size, no formula other than a member of the poll-tax family will avail to raise it. When the revenue required falls, certain families of regressive formulae are able to provide members adequate to the task. For smaller revenues the family of proportionate taxes is able to do this; and for still smaller revenues families of progressive formulae become available. As between formulae for which the *rate* of regression or progression is constant for all values of x ,

those which are more regressive or less progressive, in the sense defined in Chapter II. § 6, are competent to provide larger revenues than less regressive or more progressive formulae. There is one type of formula, that represented by the equation $R = (x - k)$, which deserves more particular mention. This is the type that would be required, in a community of persons with dissimilar incomes, to satisfy the canon of equi-marginal contemporary sacrifice. Obviously, however, under it nobody would have any interest in securing an income in excess of k . Hence, apart, of course, from coercion to work, no revenue whatever would be forthcoming. In other words, this type of formula is only available in respect of a nil revenue!

§ 5. As between available formulae, in the sense explained in the preceding section, certain comparisons can be made in a general way irrespective of the quantity of revenue that is being raised. It is easy to see that, for *any* quantity of revenue, a system of levying it which involves a lower marginal rate of tax will always check work (or prevent work from expanding) less than a system which involves a higher marginal rate. By marginal rate, of course, is meant the additional increment of taxation which, under the scheme, would be imposed on an additional increment of income in excess of the income that actually stands subject to tax. Now, under a poll-tax this marginal rate of tax is plainly nil. Since we have excluded from view all formulae under which it might be less than nil, this proves that in a community, all of whose members are similar and enjoy equal incomes, a poll-tax is, from the announcement point of view, the *optimum* method of raising a given revenue. Remembering that we have ruled out of account tax formulae which are progressive for some and regressive for other values of x , we observe further that, for a given revenue, the marginal rate of tax must be smaller under any regressive tax than under a proportionate tax; and under a proportionate tax than under any progressive tax. Hence, regressive tax formulae are superior to proportionate formulae; and proportionate formulae are superior to progressive formulae. In like manner, as between formulae in which the rates of

regression or of progression are constant for all values of x , more regressive formulae are superior to less regressive formulae, and less progressive formulae to more progressive formulae.

§ 6. When our view is extended to cover formulae in which rates of regression and progression are not constant, it is no longer possible to draw up an order of merit in an absolute sense, *i.e.* irrespective of the quantity of revenue which has to be raised. This is to be expected because, for different amounts of revenue, different members of the several families are needed. Let John of family A and Johann of family B be the appropriate members to raise revenue R_1 ; while Henry of family A and Heinrich of family B are the appropriate members for revenue R_2 . There is, then, nothing to prevent John winning against Johann, while at the same time Henry loses to Heinrich. In our symbols John and Johann are represented respectively by $R_k = a_k\psi_1(x)$ and $R_k = b_k\psi_2(x)$, and Henry and Heinrich by $R_r = a_r\psi_1(x)$ and $R_r = b_r\psi_2(x)$. Then John will be superior to Johann, provided that $a_k\psi_1'(x) < b_k\psi_2'(x)$ in the neighbourhood of revenue R_k , and Henry will be superior to Heinrich provided that $a_r\psi_1'(x) < b_r\psi_2'(x)$ in the neighbourhood of revenue R_r . It is obvious that these two inequalities do not imply one another. Comparisons between the merits of different families of formulae cannot, therefore, in general, be made except with reference to given quantities of revenue. We are only able to lay down universally, in respect of *any* revenue, that, on the assumptions here taken, the appropriate member of the family of proportionate taxes is inferior to the appropriate member of any regressive family and is superior to the appropriate member of any progressive family.

§ 7. In what has been said so far we have been concerned to discover *whether* arrangement A is better or worse than arrangement B, and nothing has been said about *how much* better or worse it is. From any group of similar persons with equal incomes a given revenue can be raised with less sacrifice by a poll-tax than by a tax proportioned to income derived from work, and by a tax proportioned to income

derived from work than by a progressive tax ; but we do not know whether the difference made to aggregate sacrifice by the choice of one or other tax formula will be trifling, considerable or large. Now, whatever the amount of revenue to be raised from any group of similar persons with equal incomes, it is easy to see that, if the quantity of work that taxpayers chose to do only varied to a very slight extent with the prospect of reward—if, that is to say, the elasticity of supply was extremely small—the difference made to work done and, therefore, to aggregate sacrifice, by choosing a poll-tax, a proportionate tax, or a highly progressive tax would be trifling. Hence, in order to determine practically how important it is to choose a good tax formula for any income group rather than a bad one, we have to consider whether the elasticity of the supply of work by taxpayers in that group is likely to be large or small. “With the great majority of people, once their occupation is decided upon, the quantity of work which they do is only to a very limited extent within their own control. Their hours are fixed by rule ; the intensity of their efforts in many cases by custom and tradition ; their age of retirement by pension arrangements. It is only a comparatively small number of persons for whom the question often arises : “Is it worth my while to do this extra piece of work, in view of the fact that, if I do, a part of the proceeds will be taken away in taxation?” The Minority of the Committee on National Debt and Taxation write : “In the large and growing field of salaried enterprise [as contrasted with the medical, legal and such other professions as are usually remunerated by fees] both work and remuneration (and frequently also the age of retirement) are fixed, and the taxpayer cannot earn more by working harder or longer to compensate for his increased taxation ; nor can he reduce his liability to pay taxes by diminishing his output of work, unless he gives up his employment altogether. With the growth of joint-stock enterprise it appears to us that the case of the taxpayer who can and does adjust his output of work in accordance with his liability for taxation is so exceptional that it cannot now have any serious effect upon the total national output of pro-

ductive work.”¹ Moreover, in the higher walks of industry wealthy men in control of large concerns are often much more interested in the success of their concerns as an index of capacity and a means to power than in variations in the amount of their net private incomes, which are in any event ample. The Colwyn Committee, with the assistance of the Board of Trade, attempted to compare, from this point of view, the effects of the comparatively low pre-war taxation with the high taxation of 1922-23, and concluded “that the comparison lends no support to the view that the weight of post-war taxation tends to deter the wealthy man from continuing in business after reaching the age at which he might well retire”.² It must, indeed, be conceded that, from a long-period, as distinguished from a short-period point of view—and it is long-period effects that are relevant to tax problems—the extreme rigidity of work supply, to which the above considerations point, is somewhat relaxed. A man considering whether to undertake the effort and expense necessary to fit himself for a difficult type of work will, in large part, determine his choice by reference to the prospect of reward. So also will a man debating whether or not to launch out into an enterprise, which may prove very lucrative but may fail altogether. If the prize of success, should it be won, is subject to heavy taxation, enterprise is likely to be discouraged to a significant extent. Nevertheless, on a general view of the whole matter, it will, I think, be agreed that, in all income groups, for the great bulk of income-receivers the supply of work is markedly inelastic. It follows that, whatever group of persons of like incomes we are considering, the difference made to aggregate sacrifice by choosing one or another announcement formula with income as object of assessment from among those that are practically open to us³ is likely to be small.

§ 8. Finally, for all income groups, we may reasonably suppose that the advantage, in respect of aggregate sacrifice, of choosing a better tax formula in preference to a worse

¹ *Report*, p. 380.

² *Report*, p. 162.

³ Under cover of this phrase I rule out formulae of the type described at the end of § 4, under which all incomes in excess of a defined sum are taxed 20s. in the £.

one is likely to become greater, the larger is the revenue that has to be raised. I do not merely mean that the absolute excess of sacrifice under the worse formula becomes greater—which is, of course, obvious—but that the *proportionate* excess also becomes greater. Thus, if the appropriate representative from family A involves 10 per cent more sacrifice than the appropriate representative from family B when the revenue is small, the difference when it is large should be more than 10 per cent. This can be proved definitely in certain simple cases. For example, if we suppose the supply of work to be perfectly elastic, under a poll-tax the whole of whatever revenue is required will be provided through extra work, and R, the money measure of the revenue, will also measure the sacrifice imposed. Thus, the amount of sacrifice will vary proportionately with the amount of revenue raised. Under a proportionate (and the same is true of a regressive or progressive) tax, the amount of sacrifice will be equal to R *plus* whatever loss of consumers' surplus follows from restricted consumption: and this will increase more than in proportion as consumption is progressively restricted. Hence, the excess of damage under any of these taxes as against a poll-tax grows more than in proportion to the amount of revenue that is being raised. I have not, however, been able to construct any proof to the effect that the advantage of "better" formulae must *in all circumstances* increase more than in proportion as the revenue to be raised increases.

CHAPTER VI

A SYNTHESIS OF DISTRIBUTIONAL AND ANNOUNCEMENT CONSIDERATIONS

§ 1. THE analysis of the preceding chapters has dealt separately with the distributional and announcement aspects of taxation, and it is now necessary to attempt a synthesis. When a given revenue has to be raised—the effects of spending the revenue being ignored—from a community the amount and distribution of whose income is given, there must be some definite tax scheme, which, when account is taken both of announcement and of distributional effects, will involve less aggregate sacrifice than any other scheme would do.¹ This scheme will necessarily also involve some definite distribution of sacrifice among the members of the community. From Chapter IV. we know that the best scheme from a distributional point of view is one conforming to the canon of equi-marginal immediate sacrifice, modified by regard for the indirect consequences of high taxation upon the rich in checking capital accumulation, and on the poor in diminishing productive efficiency. In like manner we know from Chapter V. that the best scheme from an announcement point of view is one under which the levy on each taxpayer is made in such wise that he cannot alter the amount he has to pay in taxation by altering his way of life. If, therefore, levies conforming in *amounts* to the distributional ideal could be made in a *manner* conforming to the announcement ideal, we should have the *optimum*

¹ It is, of course, theoretically possible that there might be two or more best schemes, all involving the same amount of aggregate sacrifice; but this point we may safely neglect.

} possible means of raising tax revenue. As was argued in Chapter II., however, a government, in constructing tax schemes, is obliged to act by general rules, and cannot make separate and independent arrangements with individual taxpayers. Its practical task, therefore, is to devise a system of general rules approaching as nearly as may be to that absolute *optimum* which would be attainable if individual dealing were permissible. How well it is possible to perform that task, in other words, how nearly it is possible, in the raising of a given revenue, to bring aggregate sacrifice down to what it would be ideally, in yet other words, how close a relative maximum conditioned by the obligation to impose general rules can be brought to the absolute unconditioned maximum, (depends in any community upon two things, the way in which income and other relevant economic conditions are distributed among the population, and the way in which "handles" capable of having lump-sum taxation of the poll-tax type attached to them are distributed.)

§ 2. In a community all of whose members were similar in family estate, income and all other relevant conditions, a tax scheme which took equal sums of money from all of them by means of a uniform poll-tax would clearly attain to, and not merely approach, the absolute *optimum*. Even in a community where incomes and other relevant conditions were not distributed evenly conditions are conceivable in which the *optimum* could be attained. For taxable handles might be distributed so as to fit exactly with the distributional facts. Thus, it might so happen that, for every man, the number of hairs on the head exactly corresponded to the levy in £'s which it was desirable, from the distributional point of view, to make upon him. On the assumption that no individual can voluntarily alter the number of his hairs and that the taxing authority possesses a practicable machine for hair-counting, a tax could be assessed on each man of a number of £'s equal to the number of his hairs. This tax would be perfect alike in announcement and in distributional aspects, and would yield its revenue with least sacrifice in the absolute sense. If acres of land were distributed in the way

that we have imagined hairs to be, by assessing taxes upon them we should get the same result. In real communities, however, there are no handles distributed with this miraculous forethought for the tax-gatherer's convenience; and it is not possible to raise revenue through any system of general rules in a manner conforming to the absolute *optimum*.

§ 3. It is necessary to distinguish between two types of tax, according as they are and are not innocent of injurious announcement effects when they are set out in the form of general rules. As will appear presently, taxes assessed on true rents, windfalls and monopoly revenue belong to the former type: death duties, income tax and taxes, whether specific or *ad valorem*, on particular commodities, to the latter. Taxes of the former type being ideal from the announcement point of view, the question how far resort should be had to them must be settled by balancing their advantages in this respect against any disadvantages they may have in worsening the distributional effects of the tax system as a whole—due account being taken of costs of administration and so on. Analytically the problem is a simple one, though, as will appear in later chapters, the practical working out of it presents considerable difficulty. Taxes of the latter type are, however, also certain to be needed. At first sight, indeed, it seems that here too we have merely to seek a straightforward compromise between distributional and announcement considerations. This way of looking at the matter is, however, unduly simple, and further analysis is required.

§ 4. The argument of Chapter V. was concerned with the comparative announcement effects of various tax formulae, as addressed to a group of persons similar, not only in temperament, family estate and so on, but also in the amount of their incomes. It was shown that, when a given revenue is being raised by imposts assessed on income derived from work, proportionate taxes are less damaging than progressive taxes, and regressive taxes than proportionate taxes; the best tax being a poll-tax, which is the most regressive type of tax here admissible. If these propositions held good also

of tax formulae as addressed to a group of persons with different incomes, the *prima facie* advantages of progressive taxes from a distributional point of view would have to be weighed against their disadvantages from an announcement point of view; and, so far as analysis goes, nothing further would need to be said. But the above propositions do not hold good in this wider sense. In order to show this, we need a closer definition of the announcement effects of taxation. In respect of any taxpayer, the damage that results from addressing to him any given tax formula may be defined as the excess of the satisfaction which he would have enjoyed had no tax been imposed on him over the satisfaction which he would enjoy if this tax formula were addressed to him and if a sum equal to what is taken from him under it were paid back to him unconditionally in a lump. On the basis of this definition let us compare the announcement effects of two tax formulae addressed to a given community and so contrived that both will yield the same revenue; and let us first ignore the fact that a shilling's worth of satisfaction means more actual satisfaction to a poor man than to a rich one. Let the formulae in question be $r = \phi(x)$ and $r = \psi(x)$, where r is the amount of revenue collected from each individual taxpayer in receipt of an income x . One of these formulae, say $r = \phi(x)$, is unambiguously more progressive than the other if, and only if, $\phi''(x) > \psi''(x)$ for all values of x that are represented by incomes actually extant in the community we are investigating. I postulate that neither formula imposes upon any person a rate of tax in excess of the rate which would extract from him the maximum possible revenue; for to do this would be to defeat the purpose of the revenue officials. It then follows that, in order for the two formulae to yield equal revenues, the one which is less progressive must impose higher rates of tax than the other on small incomes. There will be a value of x , dependent on the amount of revenue required, the nature of the formulae, the way in which incomes are distributed and the attitude of the several taxpayers towards work and consumption, in respect of which $\phi'(x) = \psi'(x)$. For all values of x greater than this critical value $\phi'(x)$ will be

greater, and for all values less than this critical value, smaller than $\psi'(x)$. In these circumstances, it is not, I think, possible to prove in a general way that the aggregate announcement damage, even as measured in shillings' worth of satisfaction, will be greater under the more than under the less progressive formula : while in terms of actual satisfaction, when account is taken of the superior value of shillings to the poor, it seems highly probable that the more progressive formula will do less announcement damage than the other. To carry this matter further would evidently involve an extremely complicated mathematical analysis, the result of which could hardly, with the data available, be given a concrete interpretation. What has been said, therefore, must suffice here.

§ 5. From the above analysis, imperfect as it is, a broad practical inference can, I think, legitimately be drawn. This is that, in constructing tax schemes of the second of the two types distinguished in § 3, very little attention can usefully be paid to announcement considerations. This conclusion is further strengthened when account is taken of what was said in § 7 of Chapter V. For there, it will be remembered, we found that, for all income groups, the great majority of people are likely to supply their work in a very inelastic manner, so that not much difference will be made to the amount of work performed by substituting one tax formula for another. No doubt, an extreme formula, such as that illustrated at the end of § 4 of Chapter V., may properly be ruled out on announcement grounds; but this type of formula, in view of its reactions on capital accumulation, is also objectionable from the distributional standpoint. Against formulae which are *prima facie* good in respect of distribution we are not, I think, entitled to argue that, from an announcement point of view, something less progressive would be better. I conclude, therefore, that the right course is to seek, on the lines of Chapter IV., for the formula, which, when viewed in connection with the whole tax system, is best from a distributional point of view, and to rest content with that.

CHAPTER VII

THE STRUCTURE OF AN EQUAL SACRIFICE INCOME TAX WHERE THERE ARE NO SAVINGS

§ 1. SOME popular writers assert that tax systems in general ought to be so arranged as to impose equal sacrifice upon all taxpayers. What has been said in the preceding chapters will have made it plain that there is no ground for this claim. Moreover, it is *a priori* highly improbable that least aggregate sacrifice would be brought about by *any* method of distributing sacrifice which was independent of the amount of revenue required. The more modest claim that the particular amount of revenue, which is being raised, say, in this country at the present time, would best be collected on an equal sacrifice plan is not, of course, exposed to this logical objection. Any such plan implies, however, the imposition of *some* taxation even upon the very poorest persons, and this is *prima facie* incompatible with the principle of least sacrifice : and, even if this point be waived, the fact that no positive ground exists for asserting that the principle of least sacrifice will be best promoted by a tax system conforming to the canon of equal sacrifice still remains. Nevertheless, some enlightenment can be gained from an attempt to work out in the concrete the implications of a system of that kind.

§ 2. It is easy to see that the equal sacrifice ideal cannot be attained by any system of commodity taxes with different rates on different commodities. For different people with equal incomes often have different tastes, and so are accustomed to spend their incomes in different ways. If expenditure on whisky is taxed at a high rate and expenditure on

beer at a low rate, the man who spends £50 on whisky is penalised as against the man who spends £50 on beer. On these lines there was for many years an Irish grievance. It was given in evidence before the Royal Commission on the Financial Relations between Great Britain and Ireland of 1896 that: "Whilst the tax on spirits, the article more generally consumed in Ireland, is equal to from two-thirds to three-fourths of the price, the tax upon beer, which is the popular article of consumption in England, is only about one-sixth of the price".¹ It may be added that, under non-uniform commodity taxes not only will different persons of equal incomes suffer different burdens at the same time, but the relation between their burdens will vary as their tastes change. Thus in his Budget speech of 1904 Mr. (now Sir Austen) Chamberlain observed that the substitution of expenditure on excursions for expenditure on drink was substantially modifying the distribution of tax burdens. There is also a more subtle point. Suppose that there are two persons of equal income and general economic status, that in the aggregate of their tastes they are similar, in the sense that they would get equal satisfactions from equal incomes if they were permitted to spend them as they chose, but that one likes and purchases commodity A and not commodity B, the other commodity B and not commodity A. Suppose, further, that taxes are imposed upon commodities A and B in such wise that both these persons pay the same amount of tax. It will not necessarily follow that they suffer equal real burdens. If the demand of one for his commodity is more elastic than the demand of the other for his, the former will suffer the larger hurt; because, while they both pay the same sum of money to the Treasury, he loses more satisfaction than the other in respect of consumption which is prevented by the tax from coming into being and so contributes no revenue. In this chapter, therefore, I shall assume that all the revenue required is raised through an income tax: and I shall inquire what form of income tax would impose equal sacrifices upon all taxpayers.

¹ *Report*, p. 21.

§ 3. It will be well, as a prelude to this study, to refer briefly to some of the familiar difficulties which hamper attempts to define the concept income for the purpose of the tax-gatherer. What he desires to strike is real income, income, that is to say, conceived as a flow of so much goods and services. It is possible to conceive a state of affairs in which the tax-gatherer should make assessment upon this directly without any mediation. In actual life, however, apart from the services which an occupying owner derives from his house, it is generally held that only that part of real income which has a money counterpart can be brought into account; to bring in other parts would involve such high administrative costs as not to be worth while. In general, therefore, the tax-gatherer has to content himself, for his object of assessment, with money income. In resorting to this makeshift he does not, of course, obtain quite the same result as he would have obtained if he had been in possession of a more efficient technique. He leaves outside his net, and so differentiates in favour of, certain forms of real income, not because he wishes to do so, but because he cannot help himself. Thus he neglects the benefit which the owner of a motor-car or yacht, when he uses it himself, obtains from it directly, only including what he obtains from it indirectly when he hires it out for money. He omits also certain parts of real income that some employees—e.g. a bank-manager with a rent-free house—receive in kind. Moreover, it is easy to imagine a type of society in which all the members should club together in a self-sufficing community, growing corn, baking bread, making clothes, digging out coal and building houses, and sharing the proceeds of their joint work among themselves without any money payment whatever being made. Conceivably, the whole nation might organise itself into an immense mutual association on this pattern, with the result that, though its real income remained as large as it is now, there would be no money income at all. If this happened, money income would no longer be even a plausible index of real income. In civilised communities as at present organised it so happens, however, that by far the greater part of real

income is represented in money income,¹ so that the use of it in lieu of real income as the tax-gatherer's gauge involves only a small error.²

§ 4. A second difficulty has to do with the relation between income and capital. The intention of an income tax on the English model, *i.e.* when savings are not exempted,³ is to strike that part of the gross incomings of a year which

¹ In the co-operative societies of the United Kingdom it is sometimes suggested that a very large element of non-monetary income comes into being annually. This, however, does not seem to be so. On the side of labour, in the widest sense, there are paid managers, a paid staff and paid workpeople. There is also an unpaid committee, corresponding to the paid directorate of a joint-stock company. The work of this committee is the only item on the side of labour in which an income of real service is embodied without a money counterpart. Plainly it can only amount to a very trifling proportion of the whole. On the side of capital the contention that the co-operative form of business organisation enables a considerable amount of real income to be created which is not represented in money is more plausible. The service rendered by the share-capital of members has a money representative—though possibly, since the post-war rise in general interest-rates, not an entirely adequate one—in the interest that is paid on it. But, so far as capital is obtained by contributions to reserve funds and by the retention on the part of the societies of moneys which are to become "divis" during the interval between the purchases by members of goods for cash and the distribution of the "divis", and so far as this capital is employed in the societies' own business, with the result of lowering prices or increasing the rate of "divi", there is no taxable money representative of the real services that it renders. Thus we may imagine a society buying up a mill out of its accumulated reserves. If this mill had previously been earning £10,000 and were run now with exactly equal efficiency, no earnings of capital would appear as money profit, but the whole £10,000's worth of real income would remain, and would take the form either of lower prices or of larger dividends on purchases. The reserve fund of the whole body of British Retail Co-operative Societies amounted in 1925 to a little over £6,000,000. If we take the average amount of "divis" to be 17 millions a year, distributed quarterly, the average amount of capital held by the societies in respect of "divis" will be 2½ millions. If we reckon the real rate of return on the 8½ millions capital composed of these two sums to be 10 per cent, we have some £812,000 a year of real income not represented in money income. This, belonging as it does to a body of nearly 5,000,000 persons, amounts to about 3s. 3d. per head per annum. On the (optimistic) assumption that co-operators on the average are liable to income tax at one-half the standard rate, the aggregate revenue due on this £812,000 would be £81,200.

² The British Income Tax violates the condition of a true income tax in two further small matters. First, terminable annuities are treated as taxable income without deduction being made of that part of them which constitutes a repayment of capital. Secondly, that part of income which is saved through life insurance premiums is—within certain limits—not treated as taxable income.

³ Cf. *nost.* Chapter X.

is left over after provision has been made for maintaining capital equipment intact. Practically, however, it is not easy to draw a precise line in this matter. If a machine, which cost £100 at the beginning of the year, is worn-out during the year and a new similar machine can still be had for £100, in order to get the net income of the user of the machine we should clearly deduct £100 from his gross income. But, if during the year the price of this type of machine has risen or fallen, what exact allowance should be made? Again, when capital equipment suffers depreciation otherwise than through physical wear and tear, difficult questions arise. What allowance is to be made for the loss of value suffered by a physically perfect machine in consequence of somebody else having invented a better one? what allowance for the disappearance of the value of a mineshaft when the mine is worked out? Again, if a man buys a piece of property—a house or a necklace of pearls or the ordinary shares of some company—and the value of the property rises 50 per cent during the year, is this accretion of value to be counted as income or as an addition to capital? Is it to be treated in the same way when the appreciated property is held and when it is sold in the market and the profit realised in cash? Nobody would seriously propose to count it if it is not realised. But, if it is realised, it would seem that, with an income tax under which savings are not exempted, it should, for consistency, be counted. Administrative considerations, however, compel us to leave this type of profit out of account except when it is made by professional dealers.¹

§ 5. A third difficulty concerns expenses. Plainly, what we wish to assess is not gross income, but net income, that is gross income minus whatever expenses are specifically involved in the process of earning it—the purchase of tools or materials, travelling to and from work, and so on. In a sense, of course, a man's expenditure upon food and ordinary clothing constitutes a part of the expenses involved in earning income, for, if he did not eat and wear clothes, he certainly would not earn anything. But it is everywhere agreed that,

¹ Cf. *post*, Chapter XII. § 2.

for our present purpose, only expenditure which is incurred in immediate and special connection with the work or equipment from which income is derived should be reckoned as expenses. Even so, there will be some difficult points to settle; what part of the expenditure of the Head Master of a school in entertaining parents may properly be reckoned as expenses; what part of a doctor's bill for petrol for his car may be so reckoned; and so on. Though the principle in this matter is perfectly clear, the practical application of it is not free from doubt.¹ With this cautionary observation I leave the problem of definition, premising that money income, as ordinarily defined, will serve well enough as an approximate index of real income.

§ 6. It is plain that no income tax could impose equal sacrifice upon all taxpayers if the amount of tax to be paid by each of them depended merely upon the size of his income without regard to other elements in his economic situation. For equality of sacrifice taxation must be adjusted, not merely to the various amounts of income received by persons whose incidental circumstances are similar, but also to the various incidental circumstances of persons in receipt of equal incomes. This is a well-worn topic, and I shall content myself with a very summary discussion of it.²

§ 7. Imagine three men, each with an income of £1000, but one a bachelor, another a married man without children whose wife has no income, and another a married man with two children whose wife and children have no income. It is evident that equal sacrifice will not be imposed if these three men are taxed to an equal extent. More generally, since equal incomes, each legally belonging to a single owner, often have to support different numbers of people, allowance must somehow be made for that fact in any income-tax scheme which aims at equal sacrifice. Ideally, of course, the scale of the allowance should be related to many other conditions

¹ For a fuller discussion of the subject-matter of this chapter, cf. *The Economics of Welfare*, Part i. chap. iii.

² Cf. my article on "The Report of the Royal Commission on the Income Tax" in *Essays in Applied Economics*.

besides the mere size of the family. "It is manifestly absurd to assume that a family with four daughters in high school or college can live as well on the same income as can a family with four children under 10 years of age."¹ Practically, however, this class of consideration cannot be taken into account. We must perforce content ourselves with a rough adjustment based on the number of dependents—what constitutes a dependent being defined by more or less arbitrary rules—that an income receiver has to support. This being granted, it becomes necessary to decide how large allowances should be made for differences in number of dependents, or, more loosely, in family estate. Plainly some allowance ought to be made at all levels of income, for at all levels a bachelor has more free money than a man with an equal income who has children to support. But, if the principle of equal sacrifice requires a man with a wife and three children to be taxed one r th part of what a bachelor is taxed at a given income level, it will require the family man to be taxed more than one r th part of what the bachelor is taxed at a higher income level. More generally, it will require the fraction which the family man's tax forms of the bachelor's tax to rise as the income level rises. Thus, if at the £500 level a man in family situation A should be made to pay 50 per cent of what one in family situation B pays, at the £50,000 level he should be made to pay much more than 50 per cent, and at the £500,000 level very nearly 100 per cent. Under the existing (1927) British system allowances are so arranged that a married person with three children pays £36 less tax than a bachelor at all income levels from £800 onwards. Expressed in proportions, when incomes are wholly earned, the fraction of the bachelor's tax paid by the married man with three children works out as follows :

At	£400	.	.	.	9 per cent.
	£500	.	.	.	30 "
	£800	.	.	.	57 "
	£1,000	.	.	.	69 "
	£2,000	.	.	.	88 "
	£20,000	.	.	.	99·4 "

¹ King, *Journal of Political Economy*, vol. xxix. p. 583.

We have no means except vague guess-work to determine whether this arrangement is in reasonable conformity to the principle of equal sacrifice. The Colwyn Committee report: "Some of us think that, if regard is had solely to ability to pay, the amount of the family allowances ought to vary to some extent with the size of the taxpayer's income, instead of being absolutely fixed".¹ This means that the percentages ought to be smaller than they are in the lower half of the preceding table.

§ 8. Alongside of differences in family situation should be set differences in respect of the possession of property that will yield income after the owner has ceased to work. From the present point of view it is immaterial whether the owner of such property is now deriving his income from it or from his own work. The essential fact is that in it provision is made for his children after his death, and that, therefore, he need not use so large a part of his present income to make such provision as he would feel called upon to do if he did not possess devisable property. Consequently, if two men have equal incomes but one has property and the other not, equal taxation will inflict a larger sacrifice upon the latter, and, in order to secure equal sacrifice, some allowance must be made in his favour. Since, however, the amount of income which a man feels under obligation to provide for his children is largely determined by the amount of his present income and the standard of life implied by that, a rich man with an exclusively earned income is certain to withdraw from current expenditure a much larger absolute sum than a poor man similarly situated would do. Hence, if the allowances are given by way of abatement from assessable income, it is certain that the amount of the allowances in this sense ought to be progressive. Under the present British scale each £ of earned income is counted as equivalent to $\frac{5}{8}$ ths of a £ of investment income until a maximum allowance of £50 tax (not assessable income) is reached. For a bachelor the tax on wholly earned income works out at the following percentages of that on wholly unearned income :

¹ *Report*, p. 345.

At	£200	.	.	.	48 per cent.
	£400	.	.	.	65 "
	£500	.	.	.	67 "
	£800	.	.	.	75 "
	£1,000	.	.	.	78 "
	£2,000	.	.	.	86 "
	£20,000	.	.	.	99·3 "

The Colwyn Committee expressed the view: "The earned income relief is in itself (*i.e.* when the Income Tax is viewed apart from the death duties) entirely inadequate to mark the difference in ability to pay between an income wholly earned and one consisting wholly of investments".¹ This means that, if there were no death duties, the percentages ought to be much smaller than they are throughout the above table. In fact, of course, there are in England heavy progressive death duties, which, if reckoned as post-dated taxes on investment income, greatly augment the relative weight of tax upon investment income for other than poor persons.

§ 9. Assuming that appropriate adjustment can be and has been made for the foregoing differences in economic status, it has next to be observed that, if an equal sacrifice income tax is to be possible, certain conditions must be satisfied. The most important of these is that, apart from differences based on objective facts, which can be allowed for in the terms of our tax formula, different people with equal incomes must be so far similar that equal reductions in their incomes involve equal sacrifice. If this condition is not fulfilled, if, for example, one man in a given economic situation with a £1000 income is so constituted that to take any sum, say £100, away from him causes him more hurt than another man in a like economic situation with an equal income would suffer from a like bereavement, no income-tax formula is conceivable which will impose equal sacrifices upon these two men. This condition, therefore, unreal as it is, is a vital one. It implies, we may note, that the satisfaction which people in a given economic situation derive from income depends solely on the amount of that income, and is not affected at all by the amount (if any) or the nature of the

¹ *Report*, p. 135.

work that they do to earn it. A second condition is that the amount of revenue required is such that it is possible to raise it without imposing upon any rich man a tax so heavy that the satisfaction taken away from him is greater than the total satisfaction which some poor man would be enjoying if he were subjected to no tax at all. This condition, while not less necessary than the other, is less important, in the sense that it does not involve so wide a breach with reality.

§ 10. Before the argument can proceed, it is necessary further that we agree upon the way in which income that is not consumed, but is saved and invested, shall be regarded. In order that an equal sacrifice formula may be possible, people in each separately definable category (*e.g.* bachelors) who have equal incomes must save equal amounts. This condition is implicit in the first condition laid down in the preceding section. It means that of any income x , belonging to persons in a given category, $f(x)$ is always saved and $\{x - f(x)\}$ always consumed. On this basis it is open to us to do either of two things. On the one hand, we can accept the fact that saved income does not yield any satisfaction to the saver in itself, but only in the fruits which are derived from it later on; and, therefore, that such part of taxation as is paid out of what would have been savings involves directly no sacrifice. On the other hand, we can adopt a convention under which each unit of saved income is conceived as yielding now "virtual satisfaction", derived from the actual satisfactions which are looked for from it in the future and measured by the saver's desire for it. That is to say, if I desire to save a hundredth £ as much as I desire to spend a fiftieth £ on clothes, I am, on this convention, said to obtain equal satisfactions from saving a hundredth £ and from spending a fiftieth £ in that manner. The former plan is, in some ways, nearer to reality than the latter, but to adopt it would complicate the argument without rendering it more illuminating. I shall, therefore, here adopt the latter plan. For the present I shall ignore the fact that a continuing—as distinguished from an isolated single-year—tax assessed upon income without remission either of

savings or of income derived from savings involves an element of differentiation against the savings use. This matter is deferred to Chapter X.

§ 11. Though the ground is now fully prepared, it will be convenient to pause for a moment before attempting a constructive argument, in order to clear away a false opinion which appears to be somewhat widely entertained. This opinion is to the effect that, in all circumstances, in order to secure equal sacrifice, the tax formula must be, in some measure, *progressive*, in the sense that the rate of taxation per £ of income grows as incomes grow. This proposition is supposed to be logically deducible from the law of diminishing utility. That supposition is incorrect. All that the law of diminishing utility asserts is that the last £1 of a £1000 income carries less satisfaction than the last £1 of a £100 income does. From this datum it cannot be inferred that, in order to secure equal sacrifice—nor even, we may add, equal proportionate sacrifice¹—taxation must be progressive. In order to prove that the principle of equal sacrifice necessarily involves progression we should need to know that the last £10 of a £1000 income carry less satisfaction than the last £1 of a £100 income; and this the law of diminishing utility does not assert.

§ 12. Remembering the condition set out in § 9, that all members of our tax group are similar, in the sense that the function connecting quantities of income and quantities of satisfaction is the same for all, let us write x for quantity of income, $F(x)$ for the quantity of satisfaction derived by any taxpayer from the consumption of a net income x , and $\psi(x)$ for the quantity of tax that is taken from a gross income x . Then, *provided that the amount of work done is not altered by the announcement effects of taxation*, it is easy to see that an equal sacrifice income tax is constituted when ψ is such that, whatever the amount of the revenue required may be, $\{F(x) - F\{x - \psi(x)\}\} = k$ (k being a constant) for all values of x . The condition that the amount of work done shall not be altered by the announcement effects of taxation is that the satisfaction derived from

¹ Cf. Edgeworth, *Papers relating to Political Economy*, vol. ii. p. 240.

increasing a gross income x by a given increment is unaltered. With the notation employed above this condition may be written

$$\frac{dF(x)}{dx} = \frac{dF\{x - \psi(x)\}}{dx}.$$

But the equation $\{F(x) - F\{x - \psi(x)\}\} = k$ implies that this condition is satisfied. In other words, it so happens that the tax formula, which would constitute an equal sacrifice income tax, provided that the amount of work that people do is not modified by the announcement effects of taxation, also ensures that the amount of work that they do shall in fact not be modified.

§ 13. To this conclusion an important objection may, indeed, be made. Let the conditions be such that the scale given by the above tax formula assesses a £1000 income to £200 of tax and a £1001 income to £200 : 4s. Then, *ex hypothesi*, the work done to produce the 1001st £ yields to the taxpayer the same net satisfaction as it would do if there were no tax. But, it may be argued, though this is so, the taxpayer does not realise that it is so. All he realises is that, by working less and cutting down his gross income to £1000, he will save 4s. in taxation, and it is his opinion about the facts, and not the facts themselves, which governs his conduct. This objection, plausible as it is, has, however, an answer. Though the taxpayer may not realise the truth explicitly, he will realise it implicitly : for the fact that, if he refrains from securing the 1001st £ of gross income, his net income will be only £800 instead of £800 : 16s., will be just as patent to him as the fact that he will pay 4s. less to the Exchequer. Thus, let us start from a state of things in which the taxpayer is producing an income of £1001 and paying a tax of £200 : 4s. He reflects that, by cutting his income to £1000, he will get off 4s. of tax, and reflects about nothing else. Let us suppose that he does in fact, in consequence of this, cut his income to £1000. When he has got there, he finds that the utility of his last £ of income is more than it was before, because his income is smaller : while the disutility of the last unit of work is less than it was before, because he is doing less work.

Therefore he will again increase the amount of his work, and, in the conditions here assumed, it will pay him to go on increasing it till his gross income again becomes £1001. Any departure, which, owing to a misconception of the facts, he may make from an income of £1001, will be corrected in this way.¹ What he thinks is happening may determine his first step, but what is really happening determines his final position. It is, therefore, true in the actual world, and not merely in a world of perfectly intelligent beings, that the tax formula $F(x) - F\{x - \psi(x)\} = k$ leaves the amount of work that people do unmodified, and so, subject to the conditions stated above, constitutes an equal sacrifice income tax formula of general application. From that formula, when the function F and the constant k are given, the arithmetical value of $\psi(x)$ for every value of x can be determined. The list of these values is the tax scale, which, in the conditions given, will conform to the principle of equal sacrifice. It is evident that the magnitude of the constant k depends on the form of the function F , the aggregate amount of the community's income, its distribution among the taxpayers and the amount of revenue required. When, therefore, these things are known, the derivation of the required scale is a matter of mathematics.

§ 14. A study of the equation set out above shows that in one special case a very simple formula, and one, moreover, which is independent of the value of k , and so of the amount of revenue required, will provide an equal sacrifice income tax. This special case is that in which $x F'(x)$ is constant for all values of x , in which, that is to say, the curve whose ordinates represent quantities of marginal satisfaction and its

¹ It is thus immaterial what technical form is given to the tax scale. A formula that announces a tax-rate of 5s. in the £ with abatement of £500 obviously raises the tax of a man, who increases his income from £1000 to £1001, from £125 to £125 : 5s. The same effect is produced by a formula which allows no abatement, but taxes £1000 at 2s. 6d. and £1001 at 2s. 6½d. Under the former plan a man with a £1001 income may well think—mistakenly, of course—that by contracting his income he will escape more taxation than a similar man subject to the second plan would do, and, consequently, as a first step, may contract his income more. But, if he does this, the forces impelling him to take a second step in the reverse direction will be proportionately stronger; so that ultimately both men alike come to rest in the same position.

abscissae quantities of income is a rectangular hyperbola. From the equation $F\{x\} - Fx - \psi(x) = k$ we derive

$$F'(x) - \{1 - \psi'(x)\} \frac{dF\{x - \psi(x)\}}{d\{x - \psi(x)\}} = 0.$$

Since $x F'(x)$ is constant for all values of x , this yields

$$\frac{1}{x} - \{1 - \psi'(x)\} \frac{1}{x - \psi(x)} = 0,$$

$$\therefore \psi'(x) = \frac{\psi(x)}{x}.$$

Since everybody would agree that it is unreasonable to collect any tax from a nil income, we know that $\psi(0) = 0$. Hence the above equation is satisfied when $\psi'(x)$ is a constant; that is to say, when the rate of tax is the same for all values of x . In other words, in the special case in which the income-utility curve of the representative taxpayer—and in this matter, it will be remembered, we are assuming all taxpayers to be alike—is a rectangular hyperbola, a proportionate income tax will impose equal sacrifice upon all taxpayers.

§ 15. To this result it is easy to add another. If the income-utility curve is such that, for all values of x , $x F'(x)$ increases as x increases, that is to say, if the income-utility curve is flatter than a rectangular hyperbola, $\psi'(x) < \frac{\psi(x)}{x}$;

and in the contrary case $\psi'(x) > \frac{\psi(x)}{x}$. In order to the former

of these inequalities $\psi''(x)$ must be negative; in order to the latter positive. It follows that, if the income-utility curve is flatter than a rectangular hyperbola, we shall require, so as to impose equal sacrifices on all taxpayers, a tax formula whose rates are regressive: if the income-utility curve is steeper than a rectangular hyperbola, we shall require one whose rates are progressive. Should the income-utility curve be flatter than a rectangular hyperbola in some parts of its course and steeper in others, our formula will have to be regressive for some values of x and progressive for others.

But complexities arise here into which it is not necessary to enter.

§ 16. In order to apply these results, we need, of course, to know whether, in the community we are considering, the income-utility curve of the representative taxpayer has the form of a rectangular hyperbola or a flatter form or a steeper form: When Sidgwick writes, "If equalisation of burdens were the sole consideration, the equity of a graduated rate of taxation, rapidly increasing as incomes rise, could hardly be gainsaid", he is implicitly asserting, "The proposition that the income-utility curve of the representative taxpayer is steeper throughout than a rectangular hyperbola can hardly be gainsaid". We desire to know whether this proposition is true, and, if not, what proposition should be substituted for it. To say that the income-utility curve is a rectangular hyperbola is to say, as is implied in the argument of § 14, that to subtract 10 per cent (or any other percentage) from a man's income always causes the same loss of satisfaction whatever the size of the income: that £10 off a £100 income means the same in terms of sacrifice as £100 off a £1000 income and £1000 off a £10,000 income.¹ Plainly it is impossible to decide whether the income-utility curve of the members of our community (all of whom are assumed to be alike) is of this character or of some other defined character by any process of general reasoning. Nor is the Weber-Fechner law as to physical stimuli and the reactions found to be associated with them in physiological laboratories of direct relevance to our problem, though it affords a suggestive analogy. The only procedure available is to ask ourselves directly a series of questions in the form: given that a £10 cut from £100 income involves so much sacrifice to the representative man, what size of cut from a £800, or a £1000, or a £10,000 income would involve about the same amount of sacrifice? The questions must be

¹ That the above condition is in fact the condition of a rectangular hyperbola can be shown otherwise as follows. With our previous notation, and it being taken for granted that the curve in debate slopes downwards towards the right, let h be any constant fraction. Then, in order that $\int_0^x F'(x) - \int_0^{hx} F'(hx)$ may be constant for all values of x , it is necessary that $x F'(x) = h x F'(hx)$; a condition which, in general, implies that $x F(x)$ is constant for all values of x .

put carefully. We are concerned, not with a single-event tax, but with continuing tax systems. Therefore, when we speak of "cuts" from incomes of different sizes, we must not imagine the people affected to have developed their life and tastes to fit with the incomes named. That would run counter to our supposition that everybody is to be regarded as a representative man in respect of tastes. Tastes must be taken as given and alike for all. An accurate formulation of our questions, therefore, is: Given the difference in satisfactions yielded to a representative man by a £200 and a £190 income respectively, what is the income difference between which and £1000 income will represent that amount of satisfaction?; and so on for all other incomes. It is extraordinarily difficult to give, even within wide limits, any confident answer to this type of question. I feel fairly certain that the gap between £200 and £190 means more than the gap between £1000 and, say, £980. But does it mean more or less than the gap between £1000 and £970, or between £1000 and £940? I hesitate to say. Bernoulli's familiar hypothesis amounts, in effect, to the proposition that, in respect of incomes in excess of what is required to yield the necessities of life, the income-utility curve of the representative man is a rectangular hyperbola. *Prima facie*, this seems not unplausible—much more plausible than Cramer's hypothesis, which Marshall mentions, that the satisfaction derived from income varies as the square root of its amount. But the plausibility is, I think, due to the fact that we have left out of account an important consideration. There is an ambiguity in the concept of an income-utility curve. This may refer either to an actual individual, whose consumable income is supposed to vary while the consumable incomes of the rest of the community are taken as fixed, or to a representative individual whose income, *along with the consumable incomes of all other similar individuals*, is supposed to vary. Income-utility functions conceived in these two ways are different from one another; for the reason that the satisfaction which a man derives from the possession of a given income depends, not only on the absolute amount of the income, but also on the relation subsisting between it

and the incomes of other people. Obviously, since taxation is concerned with groups, and not with isolated individuals standing among untaxed neighbours, it is the second and not the first kind of income-utility curve that is of interest to us. For small and moderate incomes the difference between the two is probably slight. But for large incomes the proportion of the satisfaction-yield which is due to their *relative* magnitude is certainly high. While it would hurt a man in the £10,000 class a great deal if he had to make shift with £5000 while other people similarly situated were left with £10,000, the difference between the aggregate satisfaction enjoyed by the £10,000 class in a community where there were no taxes and in one where all members of this class were mulcted regularly in 50 per cent levies—on the assumption, of course, that other rival classes were subject to a like order of taxation—would, I submit, be extremely small.¹ So soon as this distinction between the two sorts of income-utility curve is grasped, we perceive that, for incomes above a moderate level, the relevant curve will be inclined much more steeply than *prima facie* impressions, derived from contemplation of the curve which is not relevant, at first blush suggested. It is *not* plausible to hold that cuts of £10,000 from incomes of £100,000, £1000 from incomes of £10,000, £100 from incomes of £1000, and £50 from incomes of £500 all imply about the same sacrifice. The first of these cuts, if imposed in a general form, would, apart from temporary dislocations, involve practically no sacrifice, the second very little, the third a substantial amount, and the fourth a great deal. I suggest, therefore, that, in the passage cited on p. 113, Sidgwick's instinct was a true one. An equal sacrifice income tax would *not* be provided by a system of tax-rates progressive only at low income levels and, thereafter, becoming approximately proportionate. Large incomes would need to be taxed at *much* higher rates than moderate incomes. Even if only a small revenue were required, not far from the whole excess amount by which large incomes exceed, say £5000, would need to be absorbed into the Treasury.

§ 17. Quite recently Professor Irving Fisher has discovered

¹ Cf. *The Economics of Welfare*, p. 92.

and published a method by which it may prove feasible to deduce from statistics of prices and family budgets important information about the shape of income-utility curves.¹ To the best of my judgment this method is theoretically valid, but much laborious statistical work will need to be done before it can yield practical fruit. It is, none the less, interesting to learn from Professor Fisher that the results of a preliminary and partial application made by him to certain statistics of the United States Bureau of Labour "confirm the common idea that progressive rather than regressive taxation of incomes is justified".²

§ 18. It remains to make one final observation. If we decide that the income-utility curve is a rectangular hyperbola, this carries with it the implication that, for equal sacrifice, proportionate taxes should be imposed whatever the amount of revenue required. Should we decide, however, that the income-utility curve is not a rectangular hyperbola, and that, therefore, something other than proportionate taxation is needed, the relation between the formulae appropriate to different quantities of revenue will not be thus simple. This point has some practical importance, because it is often tacitly assumed that, if a given tax scale is equitable in respect of one amount of revenue, a scale in which all the rates imposed are increased in an equal proportion must necessarily be equitable when 10 per cent or 50 per cent more revenue is needed. Pressed to the extreme, indeed, this thesis manifestly breaks down. For example, while a rate of 10s. 6d. in the £ for the highest incomes may well be equitable in relation to the present budget needs of this country, a rate of 21s. in the £ could not possibly be equitable in relation to a revenue double as large; for to reduce an income of £100,000 to zero is bound to inflict more sacrifice than results from reducing, say, a £10,000 income to some sum in excess of zero. The thesis is not, however, merely false in extreme cases: it is false in general. If the formula $R = \psi(x)$ furnishes an equal sacrifice income tax in respect

¹ Cf. *A Statistical Method for Measuring Marginal Utility and Testing the Justice of a Progressive Income Tax* (1927).

² *Loc. cit.* p. 193.

of a revenue R and the formula $mR = \phi(x)$ in respect of a revenue mR , $\phi(x) = m\psi(x)$ only in the case of proportionate taxes. In all other cases the equal sacrifice formulae appropriate to revenues of different magnitudes will belong, not to the same, but to different families.

CHAPTER VIII

TAXES AND BOUNTIES TO CORRECT MALADJUSTMENTS

§ 1. IN the course of the second Part of *The Economics of Welfare* I discussed at length a number of maladjustments in the allocation of resources between different employments, which tend to come about when private self-interest has free play. I was not concerned in that discussion, nor am I concerned now, with what are sometimes called "errors of distribution" in the aggregate income of the community as between rich people and poor people. The facts of distribution in this sense being taken—provisionally—as an unalterable *datum*, there still remain important maladjustments, which prevent resources from being allocated in the *optimum* manner. Of these maladjustments there are two principal causes. The first is that, in respect of certain goods and services, the return at the margin which resources devoted to making them yields to their makers is not equal to the full return which the community as a whole receives, but falls short of or exceeds that return. In other words, the value of the marginal private net product of resources so employed is greater or less than the value of the marginal social net product. The second cause is that, in respect of certain goods and services, the ratio, so to speak, between people's desire and the satisfaction which results from the fulfilment of desire is greater, or less, than it is in respect of other goods and services. In view of the detailed discussion contained in *The Economics of Welfare* it will be sufficient here to illustrate these statements in a summary way.

§ 2. The value of the marginal social net product exceeds that of the marginal private net product when resources yield, besides the product or service which is sold and paid for, other products or services for which no payment can be

collected. Thus, as Sidgwick observes, "it may easily happen that the benefits of a well-placed lighthouse must be largely enjoyed by ships on which no toll can be conveniently levied".¹ Again, uncompensated services are rendered by investments made in establishing in cities private parks, which improve the air of neighbouring houses, and in planting in dry districts forests, which improve the climatic conditions of the surrounding country. Such services are also rendered by investments on the part of factory owners in smoke-consuming devices; for these, besides economising fuel for their owners, also diminish the washing bills of people living near by. They are rendered, again, by resources devoted to developing industries of decreasing supply price, in which expansion of aggregate output makes possible the introduction of new external or (in single firm industries) internal economies. *Per contra* the value of the marginal social net product falls short of the value of the marginal private net product when resources yield, besides the commodity which is sold and paid for, a dis-commodity for which those on whom it is inflicted are unable to exact compensation. Thus incidental uncharged disservices are rendered to third parties when the owner of a site in the residential quarter of a city builds a factory there and so destroys a great part of the amenities of neighbouring sites; or when he invests resources in erecting in a crowded centre buildings which, by contracting the air space and the playing room of the neighbourhood, injure the health and efficiency of the families living there. In like manner uncharged disservices are rendered by resources devoted to developing industries of increasing supply price from the standpoint of the community, if there are any such, *i.e.* industries in respect of which an increase in output involves an increase in the supply price to the community.² It would be easy to multiply examples of these two sorts of divergence between the values at the

¹ *Principles of Political Economy*, p. 406.

² As is pointed out in *The Economics of Welfare*, industries of increasing supply price, in which higher prices are associated with larger outputs merely because the use of land has to be paid for at a higher rate, do not fall into this class. Cf. *loc. cit.* Part ii. chap. xi. § 5.

margin of private and of social net products. The existence of these divergences is bound to lead to maladjustments. It is, of course, possible to conceive a state of affairs in which the value of the marginal private net product of the resources employed differs from the value of the marginal social net product, whether by defect or by excess, to exactly the same extent in all occupations. In this case there would be no maladjustments. But the case is fanciful and unreal. In fact it is certain that there will be maladjustments, investments being stopped off too soon in some occupations and carried too far in others.

§ 3. The line of analysis sketched out in the preceding section is relevant to the choice made between competing methods of obtaining commodities which it is physically possible to obtain either by home manufacture or by importation. Apart from temporary borrowings and so on, when an article is imported from abroad, it is, in effect, obtained by the manufacture and export in exchange for it of something else. The play of self-interest, in the absence of fiscal intervention, determines how much of any commodity, which is physically capable of being made at home, shall be secured by the direct process of manufacturing it here and how much by the indirect process of manufacturing its purchase price in exports. In certain circumstances the balance which is thus set up will not be the best possible. Suppose, for example, that this country is exceptionally well qualified to make some commodity which it is now importing, so that, if the early difficulties could be got over, home manufacture would ultimately involve less real cost than importation. The distant and diffused gain from investments directed to building up the industry which makes the commodity in question may well fail to enter at full value into the profit envisaged by potential investors; with the result that too little of the commodity is obtained by home manufacture and too much by sending exports to purchase it. This type of maladjustment, which will be considered more at length in a later chapter,¹ is on the same footing as the maladjustments discussed in the preceding section.

¹ Cf. *post*, Chap. XX. § 4.

§ 4. Of abnormal relations between desire and the satisfaction obtained from the fulfilment of desire there is one, and, I think, only one, example of large practical importance. This has to do with people's attitude towards the future. Broadly speaking, everybody prefers present pleasures or satisfactions of given magnitude to future pleasures or satisfactions of equal magnitude, even when the latter are perfectly certain to occur. But this preference for present pleasures does not—the idea is self-contradictory—imply that a present pleasure of given magnitude is any *greater* than a future pleasure of the same magnitude. It implies only that our telescopic faculty is defective, and that we, therefore, see future pleasures, as it were, on a diminished scale. That this is the right explanation is proved by the fact that exactly the same diminution is experienced when, apart from our tendency to forget ungratifying incidents, we contemplate the past. Hence, the existence of preference for present over equally certain future pleasures does not imply that any economic dissatisfaction would be suffered if future pleasures were substituted at full value for present ones. The non-satisfaction this year of a man's preference to consume this year rather than next year is balanced by the satisfaction of his preference next year to consume next year rather than to have consumed this year. Hence there is nothing to put against the fact that, if we set out a series of exactly equal satisfactions—*satisfactions*, not objects that yield satisfactions—all of them absolutely certain to occur over a series of years beginning now, the desires which a man will entertain for these several satisfactions will not be equal, but will be represented by a scale of magnitudes continually diminishing as the years to which the satisfactions are allocated become more remote. This reveals a far-reaching economic disharmony. For it implies that people distribute their resources between the present, the near future and the remote future on the basis of a wholly irrational preference. When they have a choice between two satisfactions, they will not necessarily choose the larger of the two, but will often devote themselves to producing or obtaining a smaller one now in preference to a much larger one some

years hence. The inevitable result is that efforts directed towards the remote future are starved relatively to those directed to the near future, while these in turn are starved relatively to efforts directed towards the present. Suppose, for example, that a person's telescopic faculty is such that he discounts future satisfactions, which are perfectly certain to occur, at the rate of 5 per cent per annum. Then, instead of being ready to work for next year, or a year ten years hence, so long as a given increment of effort will yield as much satisfaction as an equal increment devoted to work for the present, he will only work for next year so long as the yield of an increment of effort employed for that year is 1.05 times, and for a year ten years hence so long as it is $(1.05)^{10}$ times, the yield of an increment employed for the present.

§ 5. Nor is this all. Since human life is limited, such fruits of work or saving as accrue after a considerable interval are not enjoyed by the person to whose efforts they are due. This means that the satisfaction with which his desire is connected is not his own satisfaction, but the satisfaction of somebody else, possibly an immediate successor whose interest he regards as nearly equivalent to his own, possibly somebody quite remote in blood or in time, about whom he scarcely cares at all. It follows that, even though our desires for equal satisfactions *of our own* occurring at different times were equal, our desire for future satisfactions would often be less intense than for present satisfactions, because it is very likely that the future satisfactions will not be our own. This discrepancy will be more important the more distant is the time at which the source of future satisfaction is likely to come into being; for every addition to the interval increases the chance of death, not merely to oneself, but also to children and near relatives and friends in whom one's interest is likely to be most keen. No doubt, this obstacle to investment for distant returns is partly overcome by stock-exchange devices. If £100 invested now is expected to reappear after 50 years expanded at, say, 5 per cent compound interest, the man who originally provides the £100 may be able, after a year, to sell his title in the eventual fruit for £105; the man who buys from him may be able similarly to get his capital of

£105 back with 5 per cent interest after one year; and so on. In these circumstances the fact that any one man would require a higher rate of interest per annum to induce him to lock up £100 for 50 years than he would to induce him to lock up the same sum for one year makes no difference. But, of course, in actual fact this device is of very narrow application. As regards investments, such as planting a forest or undertaking drainage development on one's own estate, which can only be accomplished privately, it is not applicable at all; and, even where investment is undertaken by a company, investors cannot seriously expect to find a smooth and continuous market for non-dividend paying securities. Thus the free play of self-interest will cause resources to be turned more than they ought to be—maximum aggregate satisfaction being taken as our goal—to the use of immediate consumption, and less than they ought to be to the use of distant consumption, the proportion directed to the service of some (unknown) intermediate future being presumably about right.¹

§ 6. When maladjustments have come about or are threatening to come about from either of the two causes which I have been describing, it is always possible, on the assumption that no administrative costs are involved, to correct them by imposing appropriate rates of tax on resources employed in uses that tend to be pushed too far and employing the proceeds to provide bounties, at appropriate rates, on uses of the opposite class.² There will

¹ In an important article in the *Economic Journal* for December 1928, Mr. Ramsey has shown how to determine, on certain hypotheses, how much of their incomes people of different incomes would need to save in order to maximise satisfaction. This is a step beyond the results reached in the text, but is not, of course, inconsistent with them.

² It will be noticed that these results, so far as they refer to industries of increasing and decreasing supply price, though similar to those reached by Marshall in the *Principles of Economics*, Book v. chap. xii., are not identical with them. Marshall shows that sometimes, though not always, the payment of a bounty on the production of a commodity obeying the law of decreasing supply price will add to consumer's surplus (measured in money) more than the money cost of the bounty, and suggests that there is a *prima facie* case for a bounty only when this condition is satisfied. My thesis is that there is a *prima facie* case for a bounty in all cases where the payment of it adds to consumer's surplus (as measured in money) more than the addition made to aggregate real costs of production (as

necessarily exist a certain determinate scheme of taxes and bounties, which, in given conditions, distributional considerations being ignored, would lead to the *optimum* result. There will also be a range of schemes, which, while falling short of the *optimum*, would, nevertheless, increase aggregate satisfaction above the level attainable under the free play of self-interest. Of course, in real life considerable administrative costs would be incurred in operating schemes of this kind. These might prove so large as to outweigh the benefit even of the *optimum* scheme, and, *a fortiori*, of the others. Again, it must be clearly understood that, unless the rates of taxes and bounties imposed fall within certain determined limits, more harm than good will be done even though there are no administrative costs. Yet again, since different commodities are purchased in different proportions by rich and poor persons, no tax-bounty scheme could be worked in practice without modifying distribution. These considerations would need to be taken into account before a final judgement could be passed upon any scheme.

measured in money); and that, where conditions of decreasing supply price (from the standpoint of the community) prevail, there must *always*—under conditions of simple competition—be some rate of bounty that will accomplish this. The amount of money actually disbursed by the State in paying the bounty, being in large part a transfer and not a using-up of resources, is not, as such, a factor in the problem. Marshall's test and mine give the same results—abstraction made of my distinction between decreasing supply price from the standpoint of the community and from the standpoint of the industry—in the special case of a commodity for which the demand curve, in the relevant part of its length, has the form of a rectangular hyperbola: for in this case the sum disbursed in bounty payments is equal to the addition made to aggregate real costs (as measured in money).

CHAPTER IX

DIFFERENTIATION IN TAXATION BETWEEN DIFFERENT SORTS OF EXPENDITURE

§ 1. THE relation between the present chapter and the preceding one must be made clear. In the preceding one we were concerned with the correction of maladjustments in the allocation of resources between different uses, and it was shown that these maladjustments could, in theory, be corrected by the collection of appropriately chosen taxes from some uses and the employment of the proceeds in bounties on other uses. *In the present chapter we assume that either no corrections are required, or, alternatively, that whatever corrections are required have been made.* We thus postulate that a certain revenue, over and above whatever it may have been necessary to collect and expend in the tax-bounty system, is required ; and we ask whether and in what conditions it is better to raise this revenue by means of a uniform tax on all uses of income or by means of taxes which differentiate between various uses ; differentiate, it will be understood, in addition to and independently of any differentiation that may have been involved in the aforesaid tax-bounty system. In conducting this inquiry, I shall speak, for simplicity, as though all incomes were earned, so that the manner in which a man spends his income corresponds to the manner in which he causes labour to be allocated among various productive occupations. Our task is to compare, from the standpoint of least aggregate sacrifice, a uniform tax scheme with differentiating tax schemes. This involves a threefold inquiry. We have to examine the rival schemes in respect of (1) their announcement

aspects, (2) their distributional aspects, and (3) technique and costs of administration. I shall take these three topics in order. Throughout I shall assume that competitive, as distinguished from monopolistic, conditions prevail.

I

ANNOUNCEMENT ASPECTS

§ 2. Under this head our first need is to state with precision the problem to which a solution is being sought. It is very natural to put the issue to ourselves in the form: "Given that 200 millions of revenue are required, is it better to collect them by means of a general income tax or by means of taxes assessed at different rates upon different sorts of expenditure?" Ninety-nine persons out of a hundred would take this to be a definite and completely unambiguous question. But in fact it is not so. To obviate irrelevant complications let us imagine a community all of whose members are exactly alike and have equal incomes. Even so, as was shown in Chapter V., there are likely to be a large number of formulae, with income as the object of assessment, by means of which 200 millions may be raised, these formulae differing in respect of the amount of sacrifice which they impose. An exactly analogous statement holds good of a tax yielding 200 millions that is confined to particular sorts of expenditure. Hence it is impossible to make any *general* comparison between the effects of raising 200 millions by a tax differentiating between various uses of income and those of raising the same sum by a non-differential tax on all uses of income. For, while some differential schemes would involve less aggregate sacrifice than some non-differential schemes, other differential schemes would involve more aggregate sacrifice than some non-differential schemes. The result of the comparison would, in short, depend on the choice made of schemes to be compared.

§ 3. We have, therefore, to decide upon this choice. It

is clear that the rival levies, one assessed on the whole of a man's income, the other assessed, at least as regards some portion of it, on the part of his income spent in a particular way, must be represented by defined formulae. This is necessary in order to give our question *any* meaning. In order to give it an *interesting* meaning, it seems at first blush that the formulae should be identical save only in respect of the object of assessment embodied in them. It is, however, impossible to raise the same revenue by imposing a given formula on the whole of a man's income and by imposing it on a part of his income. Hence the formulae to be compared must necessarily be different. Though different, however, in order that the comparison may be interesting, they must be members of the same family. Thus, if x be the aggregate of income and y the part of it that is expended in a particular way, say, on beer, and if $R = \psi x$ be the tax formula in the first case, the tax formula in the second case should be $R = m\psi(x) + n\psi(y)$, it being understood that R has the same value in both formulae. Our problem then becomes: Given that a revenue R can be raised either by a tax assessed in the form $R = \psi x$ or in the form $R = m\psi(x) + n\psi(y)$, on which plan will the aggregate sacrifice imposed on the taxpayers be smaller? The simplest special case of this general problem is presented when $\psi(x)$ has the value kx , k being a constant. That is to say, it is premised that, whatever taxes are imposed, whether on income as a whole or on certain particular ways of spending it, shall be simple proportionate taxes. I shall confine my detailed analysis to this simple case. There is reason to believe that the broad results attained hold good as a general rule, though not universally, for more complex cases also.

§ 4. Given that adjustment has been made so as to eliminate all divergences at the margin between private net product and social net product (together with the second set of different but analogous divergences considered in Chapter VIII.), then, *so long as no revenue has to be raised*, any further fiscal interference with "natural" arrangements—distributional factors are, of course, here excluded—is bound to be harmful. For the satisfaction obtained from the marginal

unit of work devoted to any one use is equal to that obtained from the marginal unit devoted to any other, and each of these satisfactions again is equal to the dissatisfaction involved in the marginal unit of work performed in each and every use ; which, distribution apart, is obviously the *optimum* possible situation. There is a temptation to step from this thesis to the further thesis that, given equality between private and social net products at the margin, together with the other condition referred to above, fiscal differentiation must still be injurious and wasteful even though revenue has to be raised. We have proved that any differentiation (over and above that provided for in Chapter VIII.) is harmful when operated alone : we infer that it must also be harmful when superimposed upon the collection of a given revenue by non-differential taxes. This inference suggests itself almost immediately to the mind ; for, if a differential arrangement is bad, how should the fact that a revenue is needed do away with its badness ? A proof that differentiation is bad, so to speak, in itself is thus made to serve for a proof that differentiation among taxes required to raise a revenue is bad. With great deference I venture to suggest that even Marshall fell into this trap. For in chapter xi. of *Money, Credit and Commerce*, which is concerned to show that protective import duties are evil because they are differential, the argument and the illustration used in support of it relate to conditions in which differentiation is being practised but no revenue is being raised.¹ Where a Marshall is caught the trap must be subtle indeed !

§ 5. One further preliminary remark is required. A careless reader might imagine that our problem could be solved by some simple development of Marshall's proposition that, distributional considerations being ignored, a given revenue can be raised with less sacrifice by a tax imposed on a commodity for which the demand is inelastic than by one imposed on a commodity (produced under similar conditions of supply) for which the demand is elastic : and of the analogous proposition that, given similarity between the conditions of demand for two commodities, a given revenue

¹ *Loc. cit.* p. 211.

can be raised with less sacrifice by a tax on the one of relatively inelastic supply than by a tax on the one of relatively elastic supply.¹ To prove, however, that it is better to tax commodity A exclusively than commodity B exclusively throws no light on the question whether it is better to tax A exclusively or to obtain the same revenue by taxing A and B at equal (*ad valorem*) rates. Still less does it help us to decide what, if any, degree of differentiation between the rates on A and B will minimise aggregate sacrifice. Our problem is, in short, an entirely different one from Marshall's, and cannot be successfully attacked by his methods.

§ 6. Let us begin with the consideration of two highly simplified special cases. Thus, suppose that there are only two uses, one (A) of elastic, and the other (B) of inelastic demand, and that supply is conducted under conditions of constant return in both. If the demand in B is *absolutely* inelastic, the same amount of commodity will be produced and the same amount of work done there, whether a given revenue R is collected by a uniform rate of tax on both A and B or by a higher rate of tax concentrated upon B alone. Under the former system, however, people will be prevented by the threat of the tax from performing as much work in A as, in the circumstances, if left alone, they would wish to perform. Under the latter system they are not prevented from doing this. Hence the latter system involves the smaller sacrifice. By analogous reasoning it can be shown that, when one source of production yields an absolutely inelastic supply, so that, whatever tax system prevails, only an infinitesimal amount of work will be withdrawn from it (because any finite withdrawal causes the marginal physical productivity of work there to rise infinitely), a given revenue can be raised with less sacrifice by concentrating taxation upon this use than by imposing uniform rates of tax on all uses. From these cases of absolutely inelastic demand and absolutely inelastic supply it is easy to pass to cases of highly

¹ These propositions hold good whether we measure sacrifice by loss of consumers' surplus or by loss of consumers' *plus* producers' surplus as depicted in the familiar geometrical constructions.

inelastic demand and highly inelastic supply : and the mind is prepared for the suggestion that the best way of raising a given revenue, when the supply of work is not rigidly fixed, is by a system of taxes under which the rates become progressively higher as we pass from uses of very elastic demand or supply to uses where demand or supply are progressively less elastic. In order, however, to obtain definite results, a more powerful engine of analysis is needed.

§ 7. Mr. Ramsey, of King's College, Cambridge, has examined the problem by mathematical methods and has obtained a very interesting solution. We start, as hitherto, from a state of things in which either there is no divergence at the margin between social and private net products or whatever divergence there may have been is already corrected by appropriate adjustments. Mr. Ramsey assumes further that the money collected by the government in revenue is either retransferred to holders of war loan and then allocated among different purchases in the same proportions in which its original owners would have allocated it had it remained in their possession, or, alternatively, that the government, in spending it on its own needs (and so using up resources), allocates it in these proportions. Then, provided that all the functions involved are quadratic—this implies that such independent demand and supply curves as exist are straight lines—it can be proved, differences in the marginal utility of money to different people being, of course, ignored, that the *optimum* system of proportionate taxes yielding a given revenue will *cut down the production of all commodities and services in equal proportions*. This is true, not merely of independent commodities, but also of commodities of complementary or rival demand or of complementary or rival supply. Thus, whether we are dealing with independent commodities, such as iron and beer, or with jointly supplied commodities, such as beef and hides, or with jointly demanded commodities, such as tea and sugar, or with wheat grown in Kent as against wheat grown in Norfolk, or with steel made by one process as against steel made by another process, we ought always so to arrange our taxes as to preserve the proportions in which these diverse

things are severally produced.¹ This result is subject to the assumption about the method of spending the money collected in revenue that is set out above. If this money is not allocated among different purchases in the same way in which it would have been allocated had it been left to fructify in the pockets of the people, the demand schedules for the several commodities will be shifted. *These* shiftings will involve shiftings in the proportions in which the several commodities are produced of a sort which are not anti-social and ought, therefore, to be allowed to occur. Since their scope will depend on the manner in which the money raised is spent, it is obvious that Mr. Ramsey's result would need to be modified, should they be admitted, in different ways according to their nature. When, however, they are ruled out, these complicated adjustments are not required. If the functions involved are not quadratic, it is not, of course, possible to obtain a result so beautifully simple as the above. Mr. Ramsey has, however, worked out the general case also and has obtained a formula which is valid for small rates of tax. As before, the result is that different commodities—under which term are included portions of the same commodity produced in different places or by different methods—should be taxed in such a way that the production of all of them is reduced in equal proportions. If the supply of work is rigidly fixed, irrespective of the nature of tax announcements, the proportionate reductions required will, of course, be *nil*; and everything should go on in exactly the same way as it would have done had there been no taxation, except only that the government, instead of private persons, has the use of a certain part of the national output. To secure this result uniform proportionate taxes must be imposed on all uses of income. In real life, however, the supply of work is not rigidly fixed irrespective of the nature of tax announce-

¹ It should be noticed that, in order that this condition shall be satisfied, it may be necessary to impose on some commodities a negative tax, *i.e.* a bounty. A reduction in the supply of sugar, for example, consequent upon taxation, might so affect the demand for damsons that, without a bounty, it would be impossible to prevent the production of damsons falling off in a larger proportion than the production of sugar (*cf.* Ramsey, *Economic Journal*, March 1927, p. 54).

ments. In order, therefore, to carry out Mr. Ramsey's rule, it will, in general, be necessary to tax different commodities at higher or lower (*ad valorem*) rates according as, prior to taxation, they show (1) less or greater elasticity of demand, and (2) less or greater elasticity of supply, equal weight being assigned to demand elasticity and to supply elasticity.

§ 8. This result throws an interesting light on the question whether, as a means of raising revenue—apart from the considerations brought under review in Chapter VIII.—advantage is likely to be found in taxing the imports of any commodity at a higher rate than the competing home products. For the purposes of this section the possibility of obtaining a contribution from foreigners in general, as distinguished from the particular foreign producers of the taxed commodity, which will be examined in Chapter XIX., is ignored. Since only a small part of our exports exchange against any particular foreign import, we may reasonably regard the production of our exports, from the point of view of this problem, as conforming approximately to conditions of constant return. Then the real supply schedule of the import, to be set against that of the competing home product, is approximately regulated by its supply schedule in terms of money in our market. The question whether a higher rate of tax should be imposed on the imported product than on the home product turns, therefore, on the question whether the imported supply in this sense or the home-made supply is the less elastic. In certain cases there can be no doubt that the imported supply will be the less elastic. When there is a surplus in some foreign country of a commodity for which England is the only available large dumping-ground, it will pay the foreign manufacturer to accept what price he can get, and the amount he offers will scarcely be altered by (moderate) variations in the price obtainable. Special duties upon imports of this character, if they could be worked in practice, would, therefore, from a purely national point of view, be an excellent means of raising revenue. The case of ordinary foreign goods imported in ordinary circumstances is, however, different. Here the

presumption is that the domestic supply is the less elastic of the two. For, presuming, as, in the absence of special knowledge, is reasonable, that the elasticity of *production* is the same at home and abroad, the elasticity of the home supply will be equal to, but that of the foreign supply to our market will be greater than this. The reason is that a given rise of price in England will increase the *proportion* of the foreign production that comes to us as well as the aggregate amount of that production.¹ It follows that, in the absence of special knowledge, there is a presumption—of course when we have special knowledge the presumption may be overthrown—in favour of taxing imports at a *lower* rate than competing home products. There is certainly no presumption in favour of the opposite and more popular form of differentiation. This result is subject to the condition that no appreciable contribution to our revenue can be obtained from foreigners in general—a proviso the validity of which will be considered in Chapter XIX.

II

DISTRIBUTIONAL ASPECTS

§ 9. In comparing differential and non-differential tax systems from the standpoint of distribution we have to consider two things: the treatment of people of equal incomes and dissimilar economic situations; and that of people of unequal incomes and similar situations. Since our objective is least aggregate sacrifice, it is clear that members of the first group should be taxed equally, subject to allowances for the differences in their economic situations; and that members of the second group should be taxed in such a way that people pay progressively heavier *rates* of taxation the larger their incomes are. We

¹ Let A be the foreign production and D the foreign consumption. Let e be the elasticity of production, both in England and abroad, and η the elasticity of the foreign demand. Then, for a one per cent rise of price in the English market the foreign import rises from $(A+D)$ by $\{eA - \eta D\}$ times one per cent. Therefore the elasticity of the foreign supply to our market is equal to $\frac{eA - \eta D}{A - D}$. Since η is negative, this is $> e$.

have to inquire how far these *desiderata* point towards differentiation between various commodities and uses.

§ 10. Before this issue is joined, attention should, however, be called to a point which has considerable practical importance. At first sight it appears that, apart from the matter of savings, which will be studied in the next chapter, a general income is entirely non-differential in character. For a proportionate income tax this appearance rightly represents the facts. But, if the tax is progressive, reflection shows that there may be very heavy differentiation against enterprises in which there is a chance of large gain to be set against the chance of large loss, as compared with safe enterprises of equal actuarial promise. For, if ten men between them invest a hundred thousand pounds in a safe enterprise yielding 5 per cent, there result ten incomes of £500 each; but if the ten invest in ten hazardous enterprises of equal aggregate promise, and nine of them lose their money, the successful one must receive in compensation an income of £5000, the aggregate tax on which is much larger than that on ten incomes of £500 each.¹ Sir Josiah Stamp has pointed out that this differentiation is eliminated so far as risks are covered by insurance, the premiums for which enter as (untaxed) expenses of the business. Many risks in industry are in fact covered in this way—ships, for example, are regularly insured against loss at sea—but others, such as the risk of failure in new ventures, cannot be so covered.² There is a strong presumption that the consequent differentiation must unduly check daring in industry, thus indirectly damaging production and through it economic welfare.

§ 11. Returning from this digression, we note that, as between people of equal incomes but unlike economic situations, it is possible to accomplish *certain* desirable adjustments by a particular kind of differentiation; namely, by superimposing on a general income tax certain special taxes upon luxury expenditure. Thus, of two men with equal incomes one may have heavy obligations of a kind

¹ Cf. Hawtrey, *The Economic Problem*, p. 371.

² Cf. "Taxation, Risk-bearing and the Price Level," *Economic Journal*, June 1928, pp. 208-9.

which it is not possible to schedule for allowance under income tax: for example, an obligation to support financially a sick friend not related to him. The man free from this obligation may be expected to spend a much larger proportion of his income on personal luxuries; and a heavy tax specialised upon luxuries may thus serve to bring into account the difference between his true "taxable capacity" and that of the other man. This is not, however, a very important matter.¹

§ 12. As between people of unequal incomes it is, no doubt, theoretically conceivable that a progressive scale of taxation should be constructed on the basis of a number of commodity taxes with rates steepening as we pass from commodities mainly purchased by the poor to those mainly purchased by the rich. As will be shown more in detail in the next chapter, the practical difficulties in the way of this arrangement are, however, insuperable; and, even if this were not so, it would need no argument to prove that whatever scale of graduation we decide upon can be established far more exactly, as well as far more easily, by the imposition of a general income tax than by any combination of various commodity taxes.

§ 13. In sum, then, it appears that distributional considerations are, in the main, opposed to differentiation between tax rates on different sorts of expenditure, but that there is a case for superimposing some special duties on luxury consumption upon a general income tax. It need hardly be pointed out that the concrete arrangements which this kind of differentiation would involve are entirely different from those suggested by announcement considerations.

III

TECHNIQUE AND COSTS OF COLLECTION

§ 14. For practical purposes a non-differential tax system means an income tax or a general expenditure tax; because,

¹ When no other provision is made to eliminate the differentiation against savings, which, as will appear in the next chapter, is involved in an ordinary income tax, special imposts upon luxuries may also be advocated as a partial set-off to this.

to collect commodity taxes¹ at a uniform, or, indeed, at any rate upon all goods and services is not administratively feasible. Wherever, therefore, considerations of technique exclude an income tax, the system adopted must be a differential one. In certain conditions an income tax cannot be made to work except at inordinate cost: in a highly scattered community of farmers, for example, with bad means of communication and a weak central government. Where this is so, technical considerations may compel us to rely on a limited number of import duties collected—if our community is an island—by officials stationed at the ports. Again, it is possible to imagine conditions in which direct taxes are so unpopular and administrative machinery so inefficient that an income tax would be rendered unworkable by evasion. In England, of course, at the present day, there is no question of anything of this kind. What measure of evasion is in fact practised is a matter of controversy. But over a wide range the device of taxation at source stops it altogether; while over other parts of the field the administrative machinery wielded by the Treasury is admittedly well equipped. For this country, therefore, so far at least as what are known as the income tax paying classes are concerned, considerations of technique and cost of collection give no ground for preferring differentiating commodity taxes to a general income tax.

§ 15. The issue is more doubtful as regards that large part of the community which is made up of manual wage-earners. Until recently it was regarded as axiomatic that the difficulty and cost of collecting income tax from these persons would be so great that whatever levy it is decided to make from them *must* be made through commodity taxes. According, however, to evidence given before the Royal Commission on the Income Tax, it has proved feasible, by

¹ It is usual to speak of taxes of this kind as *indirect* taxes, on the ground that they are supposed to be paid ultimately by people other than those from whom they are collected. To make a definition depend on questions about incidence that may be disputed is, however, very inconvenient. Moreover, if it be assumed, for example, that duties on imports are paid by the consumer, these duties are only indirect provided that they are levied when the goods affected are in the hands of dealers. To collect them from consumers would turn them into direct taxes.

the device of quarterly (since 1925 half-yearly) assessments on wages, to collect income tax at a very reasonable cost from a large body of weekly wage-earners. Though, therefore, there are still difficulties and inconveniences to be overcome,¹ it cannot, I think, any longer be held that the income tax method of levy is altogether out of the question for small incomes. To grant this, however, is not to deny that, on balance, technical and administrative considerations still tend towards commodity—and so differential—taxes as a means of collecting revenue from poor persons. The sort of differentiation required would, of course, be quite different both from that suggested by announcement considerations and from that suggested by distributional considerations.

IV

§ 16. From each of the three points of view distinguished in § 1 we have thus found that a case can be made out for some measure of differentiation as against a tax system which, after the manner of income tax, draws no distinction between the various ways in which income is expended. The kinds of differentiation which the three points of view suggest are, however, different from, and incompatible with, one another. They are also—all of them—different from, and incompatible with, the main body of differential taxes that are likely to find advocates among practical politicians dependent upon votes and subject to the pressure of powerful interests.

¹ Cf. Stamp, *Current Problems in Finance and Government*, p. 223.

CHAPTER X

INCOME TAX AND SAVINGS

§ 1. Up to this point I have deliberately slurred over the difference between a general income tax and a general expenditure tax ; and I have tacitly assumed that a general income tax does not differentiate in any way between different uses of income. This assumption is not, however, correct, and the time has come to go into the matter more fully. There are two main uses, each, of course, containing numerous subdivisions, into which income can be turned—investment and consumption. The latter use is ordinarily spoken of as “ spending ” in contradistinction from saving, and, though the term is unfortunate, since, of course, saving is itself a form of spending, namely, spending upon machines and other capital objects, it may, with this explanation, be allowed to stand. A general income tax, as understood in England, can be shown to differentiate against the investment use of income and in favour of its rival.

§ 2. The proof of this proposition is as follows. (A general income tax, since it hits equally income that is saved and income that is spent, appears at first sight to be neutral between these two things. This appearance is, however, illusory. If we had in mind a tax to be imposed for one year only, or for a short period only, at a given rate, it would, indeed, be correct. But, in relation to a system of taxation that is expected to continue indefinitely with constant rates, an expenditure tax is neutral as between saving and spending, and not differential in favour of spending. For the only ultimate advantage a man gets from saving is the return from his investment that he and his heirs can afterwards spend. This means that, under a tax system based on

expenditure, resources that are saved are taxed indirectly, through their subsequent yield, to the same extent as resources that are consumed at once. There is, therefore, no differentiation of any kind. An income tax, on the other hand, differentiates against saving, by striking savings both when they are made and also when they yield their fruits.) Thus, a general permanent income tax at the rate of x per cent strikes the part of income that is spent at this rate. But, if £100 of income is put away for saving, it removes £ x from it at the moment and, thereafter, removes also some part of the fruits yielded by it.¹ How large this secondary taxation will be depends on the subsequent conduct of the saver; i.e. on whether he withdraws his savings with a view to spending them soon or late or never. For purposes of illustration, however, let us suppose that the saver's investment is a permanent one, so that the principal is never withdrawn. Then

the secondary taxation amounts every year to $\frac{x}{100}$ ths of the fruit of the £ $(100 - x)$ that are actually turned into the investment. The total effective rate of tax per cent is, therefore,

$[x + \frac{x}{100}(100 - x)]$; that is, $x[2 - \frac{x}{100}]$. Thus, the effective

rate on saved income is practically double the rate on spent income when the tax is small, and substantially more than equal to, though less than double, that rate when it is large. For example, a general rate at 10s. in the £ implies a tax, not of 10s., but of 15s. in the £ on saved income. The edge of this analysis is, indeed, found, when looked at closely, to be less sharp than it seems to be. For, first, it has been tacitly assumed that investment always yields future fruit

¹ Professor Cannan objects to this way of stating the matter on the ground that "we save and spend out of what the government leaves us after we have paid over our income tax" (*Economic Journal*, 1921, p. 213), so that to speak of £100 as being put away for saving and, thereafter, as being taxed is illegitimate. If, however, we put the issue in Professor Cannan's way, the result is still the same. For then the saved part of income (income being interpreted as what is left over after taxation) is taxed on its fruits and the spent part is not taxed at all. Though, however, I maintain my view, the fact that not only Professor Cannan but also a writer of perhaps even higher authority on such a matter, Sir Josiah Stamp (*The Principles of Taxation*, p. 58), dissent from it should be recorded.

subject to taxation, while expenditure upon consumption does not. This is incorrect. On the one hand, some saving yields nothing at all. On the other hand, some expenditure, *e.g.* upon food, clothing, and house-room, builds up the efficiency of human instruments, just as investment in the ordinary sense builds up the efficiency of mechanical ones, and, therefore, like it, leads to the production of future income. Secondly, it has been tacitly assumed that the rate of tax on the fruit of savings will be equal to the rate on savings as made. This is not always so. If, as in England, unearned, or investment, income is taxed at a higher rate than earned income, the fruit of savings made from earned income will be taxed at a higher rate than the original savings, so that such part of earned income as is saved is really exposed to severer adverse differentiation than the formula given above indicates. But, *per contra*—and this is practically more important—where, as in England, there is steep graduation against large incomes, income which is saved by a rich man and left to a relatively poor man, on whose income the income tax (including super tax) rate is lower, is not differentiated against so heavily as the formula indicates. Though, however, these considerations leave our results less clear-cut than might be wished, the broad conclusion that a general income tax on the British plan differentiates, in some measure, against income that is saved remains unshaken.

✓§ 3. In considering in this place whether or not this differentiation against saving is in conformity with the principle of least sacrifice, I shall assume that any maladjustment in allocating resources between saving and consumption, which the free play of self-interest tends, in the absence of taxation, to bring about, has already been corrected on the lines indicated in Chapter VIII. We are not here concerned with such differentiation as may be needed to effect this correction. That is a different and additional problem. Ruling it out, we ask whether the principle of least sacrifice demands differentiation against savings irrespective of the adjustment differentiation which we have seen to be required, and here

assume to be made, in the opposite sense. This issue does not need a very long discussion. Taking announcement aspects first, we know from Chapter IX. that, in any income group, income devoted to saving should be taxed at a higher or lower rate than income devoted to consumption, according as the demand for savings is less or more elastic than the demand for consumption. No doubt, different classes of people vary greatly in this matter. At the one extreme are persons who save whatever surplus happens to be left over after their customary standard of life has been satisfied. For these the demand for consumption is much less elastic than the demand for savings. At the other extreme are persons who have determined to make a given provision for their families, and will maintain their savings even at the cost of a large cut in consumption. For these the demand for savings is the less elastic of the two. On a broad average there is, I think, little doubt that the savings demand is substantially more elastic than the consumption demand; which implies that, if all incomes were cut down in equal ratios, the proportion of the aggregate income devoted to savings would be reduced. Announcement considerations, therefore, suggest that income devoted to savings should be taxed less heavily than income devoted to consumption. As regards distribution, it may be argued that saved income ought to be struck more lightly than other income, because, as between savers and non-savers or less-savers among people of equal incomes, the savers probably have greater needs—the greater needs being the cause of their extra saving. This argument, of course, loses its force if the fact that some persons (*e.g.*, the recipients of earned incomes) have greater needs than other persons (*e.g.*, the recipients of investment incomes), the amount of whose incomes is no greater, is allowed for in other ways. *Prima facie*, however, differentiation in favour of saved income has the advantage that it takes account of the extra sums which particular propertyless men actually do withdraw from consumption to provide against the future, not of estimates and guesses as to what normal propertyless men might be expected to withdraw; though it must be admitted that to treat with special favour only those savings of

propertyless men which are made on account of their greater needs is not feasible. On the other hand, as between persons of unequal incomes, since there can be no question that rich people save more, not merely absolutely but proportionately also than poor people, to exempt savings from income tax and to do nothing else would involve the distributional evil of giving a substantial bounty to the rich. This objection, however, might be met, at least in part, if remissions of taxation on saved income were coupled with a steepening of the upper part of the general graduation scale. When announcement and distributional considerations are both taken into account, there would, I think, be general agreement that, whether or not it may be wise to differentiate in favour of the savings use, there is certainly no case for differentiating *against* it. An income tax under which consumption and saving are placed on an equal footing is superior, from the standpoint of least sacrifice, to one under which an extra and special impost is laid upon savings:

§ 4. (The most obvious way of removing the element of differentiation present in our existing general income tax is to convert that tax into a tax upon consumption expenditure, the rates, of course, being adjusted so as to prevent the aggregate amount of revenue raised from being cut down. We have, therefore, to inquire whether it is administratively practicable to substitute an arrangement of this kind for existing arrangements without incurring too much trouble and expense. At first sight to exempt savings from income tax seems simple. To do so is compatible alike with graduation and with family allowances. Moreover, it would be possible, if it were so desired, to make a rough adjustment for the fact that some expenditures upon consumption are, in effect, investments, yielding income in the future and, therefore, liable, under an ordinary income tax, to a double impost. Thus charges incurred for children's education might be exempted *eo nomine*.¹ In spite, however,

¹ It would be clearly impracticable to treat in this way expenditure upon other "necessaries for efficiency"; and, it should be noted that the compromise device of exempting, not actual expenditure upon these things, but fixed sums "estimated" to cover them, would not eliminate adverse differentiation.

of these possibilities all proposals to exempt saved income from income tax have hitherto been ruled against on administrative grounds. *Prima facie*, indeed, it may be argued that a tax assessed on consumed income ought to be actually easier to administer than one on total income; because, whereas consumption expenditure is readily defined, the determination of total income for income tax purposes involves, as was pointed out in Chapter VII., the very difficult problem of making proper allowance for maintaining intact the existing capital fund. Are royalty rents, for example, to be assessed for income tax at their full value, or should a deduction be made on the ground that the property from which they are derived is being gradually exhausted? If a deduction is conceded, in what way, particularly when the life of the royalty-yielding property is uncertain, should the amount of the deduction be determined? There are many similar problems connected with the difficult subject of "wasting assets", all of which are at once swept aside if we agree to exempt *all* savings, whether made for the purpose of creating new capital or of maintaining intact capital that already exists. This argument, however, is less powerful from the side of practice than it is from that of logical consistency; because, after all, compromise decisions can be, and, indeed, have been made on wasting assets puzzles, which, however unsatisfactory and unsystematic, nevertheless allow an income tax on the British plan to work and to yield an enormous revenue. On the other side the relevant considerations are of a different order. If savings were exempted, dishonest citizens might save in one year, thus escaping taxation, and secretly sell out and spend their savings in the next year. The skill of revenue officials in this country has succeeded in mastering many forms of dishonesty, but the opinion is widely held among experienced administrators that this form would prove too much for them; that so wide a door for evasion would be opened as seriously to impair the efficiency of the income tax as an engine of revenue. On a matter of this kind an academic student is not in a position to enter into controversy with practical experts.

§ 5. At first sight, there appears to be a way of escape. If that part of income which is devoted to the purchase of consumable goods and services, as distinct from capital goods and services, is taxed, and the rest left untaxed, we shall obviously have a tax system under which "spent" income is taxed and "saved" income exempted. Is it not possible then to accomplish what is desired by substituting for income tax a series of appropriate taxes upon all consumable commodities? Unfortunately, even apart from the fact that some commodities have a double use and may on one occasion serve as consumable and on another as capital goods, there are insuperable difficulties in the way of this arrangement.

A general 5 or 10 or 20 per cent tariff on all consumable imports is, indeed, feasible. But such a tariff on all consumable commodities and services—for services, of course, would also have to be included—produced at home for home consumption could never be worked successfully. It is ruled out of court by the practical difficulty, to say nothing of the enormous cost, of collecting any sort of duty on things in general. To collect such a duty through shopkeepers, though it might be worth trying in the special emergency of a great war, gives such an open invitation to fraud that an army of inspectors would be needed to combat tricksters. To collect it otherwise than through shopkeepers is even less feasible. For it would be necessary to set up a system of production in bond for all consumable articles made at home! Moreover, any sort of duty would not serve our purpose. We need uniform *ad valorem* duties. Even for imported articles an *ad valorem* system is exceedingly difficult to work on the side of valuation. The customs duties of the United States and Canada are, indeed, arranged on this system, but the task of safeguarding it against evasion has proved so exacting that Germany, after trial, abandoned it, and France, Belgium, Italy, Austria, and Russia have all fought shy of it.¹ Nor is there any way round the difficulty. Owing to the innumerable grades of quality in many commodities it is not feasible to get a common *ad valorem* rate

¹ Cf. Higginson, *Tariffs at Work*, chap. iii.

by means of scales of specific duties. Each specific rate is bound to cover more than one quality, and, whenever this happens, the higher quality will get off with a lower *ad valorem* rate of tax. Thus, even if it were a single proportionate tax on expenditure of which we were in search, this could not in practice be attained by way of commodity taxes.

The construction of a progressive expenditure tax would present other and more formidable difficulties; for it would be necessary to impose upon each commodity, not a single rate, but a number of different rates adjusted to the incomes of the various purchasers. Such an arrangement would be absolutely unworkable. The utmost we could hope for would be to secure a rough progression by taxing articles mainly consumed by the rich at higher rates than those mainly consumed by poorer persons. There are, however, serious obstacles in the way even of this. A large part of the income of the rich is spent, not on commodities but on services, *e.g.* foreign travel, of a sort that it is very difficult to hit by taxes. Moreover, the expenditure of the rich is scattered among a large number of different things, no great amount being directed to any one of them. To tax things of this sort involves very high administrative costs. Experience shows that "the lucrative revenue-yielders are the staples consumed in great amounts, and consumed chiefly by the masses".¹ It is idle, therefore, to look in practice for a system of commodity taxes that shall be better than proportionate. Nor is this all. There is some risk that a system made up of commodity taxes will prove to be actually regressive. If food articles of large consumption are included, this is almost certain to happen. "The man who possesses an income of £1000 a year does not, as a rule, drink ten times as much whisky, tea, or beer, or smoke ten times as much tobacco, as the man who possesses an income of £100 a year."² Again, if raw materials, a technically fairly easy thing to tax, are aimed at, there

¹ Taussig, *Principles of Economics*, vol. ii. 558.

² Sir D. Barbour in the *Report of the Royal Commission on the Financial Relations between Great Britain and Ireland*, 1896, p. 122.

will be regression, because equal quantities of raw material are worked up in part (with more labour) into finer articles bought by the rich and in part into the coarser articles bought by the poor. When this happens a raw material tax carries off a less proportion of rich men's than of poor men's expenditure. The same thing is true for the same reason of taxes on machinery. There is strong ground for believing that the danger of regression, to which these considerations point, is actually realised in the tax system of Great Britain. The Committee on Taxation and the National Debt, following on the lines of Sir Herbert Samuel's celebrated (1919) paper to the Royal Statistical Society, have prepared estimates of the total burden of taxation for an average married man with three children at various income levels, the incomes being supposed to be wholly earned. The percentages of income taken in taxation work out as follows :

Income.	1913-14.	1925-26.
£50	8.0	—
£100	5.4	11.9
£150	4.4	11.6
£200	4.0	10.2
£500	4.4	6.2
£1,000	5.2	11.0
£2,000	4.9	15.2
£5,000	6.7	23.2
£10,000	8.0	31.2

It is true that in the construction of this table a number of somewhat insecure assumptions are of necessity employed.¹ None the less the table strongly suggests that, both in pre-war and post-war days, British taxation as a whole has been appreciably regressive for small incomes, in respect of which, of course, commodity taxes play a dominant part. Moreover, following the line of thought suggested at the end of § 2 in Chapter VII., we readily perceive that the comparative hurt done to the poor, as against the rich, by regression operated through commodity taxes is greater than it would

¹ *Report*, p. 95.

have been had direct taxes been employed ; for taxes on particular commodities at a given rate are likely to check a poor man's consumption in a larger proportion than a rich man's, so that each £ of revenue contributed by a poor man will have attached to it, so to speak, a larger amount of non-revenue-yielding hurt.¹ Considerations of this class would not, indeed, be important in a community all of whose members were about equally wealthy. Thus, "it should not be forgotten that the Russian population has been to a large degree reduced to a common level, so that indirect taxation does not bear that anti-democratic character which it does in capitalistic countries where sharp inequalities in property exist".² In such a country as England, however, they are exceedingly important.

' Yet again, systems of commodity taxes cannot be adjusted to differences in the family estate of different people. Indeed, it may easily happen that commodity taxes, on the things on which it is easy to impose them, will not only fail to make allowance in favour of large families, but will actually take more from a man with a large family than from one with a small family; because the former is obliged to buy a larger amount of ordinary articles of food and clothing. It is sufficient for our purpose, however, that the positive allowances for differences in family estate which fairness requires cannot be made under a system of commodity taxes. The considerations set out in the preceding paragraphs taken in combination make it plain that our promised way of escape is in fact a blind alley. If the differentiation against savings present in the British income cannot be eliminated in the manner contemplated in § 4, there is no hope of eliminating it by the manipulation of commodity taxes.'

¹ Cf. *Report*, p. 213.

² G. Sokolnikoff, *Manchester Guardian Supplement*, July 6, 1922, p. 225.

CHAPTER XI

DIFFERENTIATION BETWEEN SOURCES OF INCOME

§ 1. INCOME may be distinguished into parts, not only according to the uses to which it is put, but also according to the sources from which it is derived. In the present chapter it is the latter distinction which interests us. Dr. Bowley has estimated that immediately before the war and for a long time previously some $62\frac{1}{2}$ per cent of the income of the United Kingdom was derived from work and some $37\frac{1}{2}$ per cent from "property". Within each of these two main groups there are, of course, innumerable subdivisions embracing incomes from different sorts of work and different sorts of property;

§ 2. Since the incomes received from particular kinds of work and of property are derived from the sale of the commodities or services which they produce, it is clear that differentiation between various parts of work income and various parts of property income comes to much the same thing as differentiation between income spent on various sorts of products. The general analysis of Chapter IX. is, therefore, applicable. There is, from the point of view of announcement effects, a presumption in favour of taxing incomes derived from work and from property at higher rates the less elastic is the demand or supply of the commodities to the production of which the work and property are devoted; and there is, from a distributional point of view, a presumption in favour of taxing these incomes at higher rates the smaller is the aggregate income of the recipients. It is possible that a scientific tax system could be built up on these lines. But the practical difficulties would be enormous, and in fact nothing of the kind has ever been attempted. The only im-

portant instance of differentiation in accordance with source *within* either of the two main groups of income (work income and property income) to be found in this country is afforded by the assessment to local rates of income derived, not from property in general, but from property in land and houses. The adverse differentiation against this particular kind of property income is the result of complex historical causes, which cannot be examined here, but in which considerations of administrative convenience probably played the chief part. Nobody would seriously maintain that this differentiation, which must militate seriously against investment in houses and agricultural improvements, is defensible either from an announcement or from a distributional point of view. It has, indeed, for many years been common ground that the system on which local rates are assessed in this country is thoroughly unsatisfactory.

✓ § 3. It is not, however, within the scope of this volume to attack that difficult problem. I leave, therefore, differentiation *within* the main groups, work income and property income, and proceed to ask whether the principle of least sacrifice requires that there should be differentiation *between* these groups, *i.e.*, whether work income as a whole and property income as a whole should be put upon the same or upon disparate footings as objects of tax assessment. I shall study this question first from the point of view of announcement and then from that of distribution. I assume, of course, that the same given amount of revenue is to be raised in any event.

§ 4. With tax formulae of the type $t = \frac{k}{x}$, that is to say with lump-sum taxes, it is obviously immaterial, on the announcement side, to what object of assessment the formula is nominally directed. If £1000 is to be taken from a man in any event, it makes no difference whether we assess it on work income or on property income or on both. Exactly the same consequences will follow. But with tax formulae in which a man is told that, if his holding of the assessed object increases, the aggregate amount of the levy made upon him will increase in *any* degree, the choice of the

object to be assessed is not, in general, immaterial. In practice it is certain that taxes assessed upon any division of income will be at least as progressive in respect of aggregate levy as a proportionate tax, and it is likely that they will be more progressive than this. I shall, for simplicity, conduct my analysis on the assumption that we have to do only with proportionate taxes. With tax formulæ of a more complicated nature the argument would be more difficult, but the broad results would, I think, be the same.

§ 5. If property income were rigidly fixed, in such wise that no threats to it through taxation could cause its amount to be altered, the announcement of a tax assessable upon it, at no matter what rate, would leave everybody's expectation of monetary return from anything that he might do wholly unaffected. On the other hand the announcement of any tax, other than a lump-sum tax, assessable upon income from work must lessen everybody's expectation of monetary return from work, and, therefore, must cause a smaller addition to be made to work, if not a contraction to be made in it, than is desirable from the standpoint of least aggregate sacrifice. It follows that, so far as announcement effects are concerned, if property income were rigidly fixed, the principle of least sacrifice would require the revenue to be raised by taxes assessed wholly upon it, and not at all upon income derived from work.

§ 6. In real life, of course, property income is not rigidly fixed in the sense of the preceding section. On the contrary, if property owners fail to make good the wear and tear which their equipment normally suffers, property income will decline, whereas, if they make new savings for investment, it will presently increase. In these circumstances the issue is considerably more complicated. Let us start from a position in which a uniform rate of tax is imposed on all income from whatever source it is derived, this uniform rate being ten per cent and the resultant revenue being R . It is required to determine the effects of various departures from that arrangement. Let us consider first the complete exemption of

investment income, coupled with whatever consequential increases in the rates imposed upon earned income are required to keep the revenue yield up to R.

§ 7. A proposal to exempt investment income from taxation seems at first sight too paradoxical to be worth considering. A little reflection shows, however, that there is a real purpose behind it. It was argued in the last chapter that the British income tax suffers from a serious defect, in that it differentiates against savings; but our discussion there revealed no means of removing that defect. It is easy to see that the exemption of investment income from taxation would provide a remedy; for the differentiation against savings can be removed equally well by exempting saved income when it yields its fruits as by exempting it when it itself comes into being. Unless, therefore, it can be shown that this advantage would be outweighed by counterbalancing disadvantages, it will follow that, *on the announcement side*, the exemption of investment income is in line with the principle of least aggregate sacrifice. Are there then counterbalancing disadvantages—distributional considerations are not yet to be brought into account—sufficient to refute this conclusion? If the amount of annual savings were normally equal to the amount of investment income, remission of taxes on investment income would reduce the revenue by approximately the same amount as remission of taxes on saved income. Therefore the remainder of income would have to bear the same addition of taxation. With the remission made off investment income, this remainder would consist in the whole volume of earned income: with the remission made off savings it would consist partly of earned and partly of investment income. In either event the rate of tax on the remainder, and so the rate of tax on earned income, would have to be raised to about the same extent. Hence, *on the announcement side*, the adverse reactions set up by the exemption of investment income would be no worse than those set up by the exemption of saved income. Since, then, we know that, on balance, the exemption of saved income would conform to the principle of least sacrifice, it follows

that, failing that exemption, the exemption of investment income would, from the announcement side, also on balance conform to that principle. This conclusion, however, only holds good on condition that annual savings are normally equal in amount to investment income. In a community where annual savings are substantially smaller than investment income it does not hold good. For there the exemption of investment income would involve a much larger reduction of revenue and, therefore, a much larger increase in the rate of taxation upon earned income than the exemption of savings would do.) Thus, suppose that three-quarters of a community's income comes from property, while one-fifth of its income is normally saved. Then roughly the remission of a 10 per cent tax on saved income would necessitate the rate of tax on other income being raised by $2\frac{1}{2}$ per cent; but the remission of a 10 per cent tax on investment income would necessitate the rate on other income being raised by nearly $9\frac{1}{2}$ per cent. Obviously there is much less chance of a net benefit resulting in the latter case than in the former. Obviously again in the latter case this chance will become progressively smaller the larger is the amount of property income relatively to the normal amount of annual savings.

§ 8. In the United Kingdom immediately before the war Dr. Bowley estimates that work income amounted to 1355 millions, property income to 810 millions¹ and new savings² to some 330 millions, the percentages of the total being thus respectively 63, 37 and 15 per cent. According to Bowley and Stamp's estimate for 1924 the corresponding figures then were 2860, 1200 and 475 millions, and the corresponding percentages, therefore, 71, 29 and 12 per cent.³ On both computations to remit taxation upon investment income would involve adding to the rate of taxation upon earned income a percentage some $2\frac{1}{2}$ times as large as would be required to compensate the remission of taxation upon savings. This fact creates a strong presumption, from the

¹ *The Change in the Distribution of the National Income*, pp. 23-24.

² *The Division of the Product of Industry*, pp. 59-60.

³ *The National Income*, 1924, pp. 47 and 67.

announcement point of view, against the remission of taxes upon investment income.

§ 9. From the distributional point of view the presumption is, of course, of overwhelming force. For, whereas to remit taxation upon saved income would, as has been shown, confer a considerable bounty upon the rich, to remit it upon investment income would confer an enormous bounty. Statistical calculations in this country are made difficult by the fact that business incomes under schedule D are counted as wholly earned, no reckoning being made of the part of them that is due to invested capital. As stated, however, at the beginning of this chapter, Dr. Bowley has made an estimate for 1913, according to which income from property (including, of course, property held abroad) amounted, for the United Kingdom, to $37\frac{1}{2}$ per cent and income from services and work to $62\frac{1}{2}$ per cent of the whole.¹ Out of the $37\frac{1}{2}$ per cent of property income he reckons that only about one-fortieth part was accruing in 1913 to persons with incomes below £160, among whom at that time nearly the whole of the wage-earning class would be included. Practically all of it went to persons assessed to income tax, i.e. to some 1,100,000² persons, constituting, with their families, about one-ninth of the whole population. There are no statistics to show the way in which property income was distributed within the class of persons assessed to income tax. But the predominant part of it almost certainly went to people with more than £700 a year, the total number of whom in 1910 amounted to only a little over 200,000. Further light is thrown on this matter by death duty statistics. The returns for estate duty for 1921 showed for that year—and there is no reason to suppose that it was markedly untypical—that $\frac{5}{8}$ ths of the persons dying had less than £100 of property each : among estates in excess of £100 about one-third of the aggregate value belonged to $94\frac{1}{2}$ per cent of the number (i.e., estates under £10,000), one-third to 5 per cent of the number (estates between £10,000 and £80,000) and the remaining third to $\frac{1}{2}$ per cent of the number

¹ *The Change in the Distribution of the National Income*, p. 24.

² *Ibid.* p. 22.

(estates over £80,000).¹ It is thus evident that property income is concentrated enormously more closely than work income and is, in great part, directly responsible for the extreme concentration of income in general. It has a further indirect responsibility in this sense, because the possession of property income permits of training that is likely to augment its owners' earned income also. In these circumstances to exempt property income from income-tax is a plan that nobody would seriously contemplate.

§ 10. When to the foregoing distributional argument are added the considerations set out in § 8, it becomes plain, not merely that the exemption of investment income from taxation would be highly objectionable, but that there is a strong *prima facie* case for taxing it at a higher rate than earned income. At first sight it seems that, if, in the interests of distribution, we decide to do this, we must necessarily intensify the differentiation which even a flat-rate general income tax would impose against savings. It is possible, however, to devise, at least in theory, a compromise plan, by which, in some measure, the best of both worlds would be attained. In order to eliminate differentiation against saving it is not necessary to exempt any investment income as it stands at present. It is sufficient to announce that incomes derived in the future *from investments to be made from now onwards* shall be exempt. This arrangement would not require us to give up the present tax on income derived from existing property, and so would not force us to raise the general rate of income tax to any great extent. On the contrary, for some time forward, *i.e.* until the annual income resulting from investments made subsequent to the date of change rose above annual savings, the general rate of income tax would not have to be raised so far as would be necessary were saved income exempted. In real life, it must be conceded, nobody would believe that a pledge to exempt for ever the fruits of investment made after a given date would be kept. Therefore, the only practical form of this plan is a limited form, in which the pledge is to exempt the fruits of saving for a defined term of

¹ Cf. Clay, *Property and Inheritance*, pp. 4-5.

years after they are made. Marshall has, on these lines, suggested that improvements should not be assessed to local rates till after the lapse of twenty years, in order that the making of improvements may not be discouraged. This idea can be generalised and fashioned into a proposal that property and the income from property shall remain free from taxation till twenty years after the property has been created. This means that the fruits of saving are exempt for twenty years. The plan is actuarially equivalent (interest being reckoned at 5 per cent) to cutting the rate of tax on saved income by something more than one-half. It would eliminate a large part of the differentiation against saving without necessarily ever causing the general rate of income tax to rise as high as it would do under a simple exemption of savings. *Prima facie* there is much to be said for it.

§ 11. Here again, however, as with the devices discussed in the preceding chapter, the issue cannot be decided by analysis alone without reference to administrative technique. To an outsider it would seem that, when a business man builds a new factory or when a company starts operations with a definite amount of subscribed capital, the income yielded by these investments could, without great difficulty, be ear-marked as "free of tax" for a defined period of years. But much new saving is devoted from time to time to enlarging and developing concerns which already exist. If the fruits of saving are to be exempted for any period, it will, therefore, be necessary, in respect of every concern, to analyse its total income every year and to assign an appropriate part to the new capital that was invested at each separate date. This could only be done in practice by highly arbitrary rule-of-thumb methods. Even so, elaborate machinery would probably be needed to safeguard the revenue against fraud. But these are matters for technical experts. No final judgement can be passed upon the merits of the policy here sketched out except in collaboration with them.

CHAPTER XII

TAXES ASSESSED ON INVESTMENT INCOME *VERSUS* TAXES ASSESSED ON PROPERTY

§ 1. SINCE property yields income and has a value determined by the amount of the income which it is expected to yield, there is plainly no far-reaching difference between assessing annual taxes at a given rate on investment income and assessing them at a rate—when interest rules at 5 per cent—one-twentieth part as high upon the capital value of property. Broadly, the two methods come to the same thing both from the point of view of announcement and from that of distribution. There are, however, certain secondary differences, some of which, on the practical side, have considerable importance. In the brief paragraphs that follow these will be summarily set out.

§ 2. First, a tax assessed on property will bring under review certain elements, so to speak, of psychic income, which are not reckoned with in an ordinary tax on investment income because they are neither represented in money nor can easily be given a money value by tax commissioners. Thus, such anomalies of the British income tax as taxing the annual value of a yacht or motor-car when it is let out to somebody else, but not when it is used by its owner, are eliminated. Again, there are certain elements, which do have a money representative, but are not of a kind which ordinary income taxes include. The chief of these are profits resulting from appreciations in the capital value of property; *e.g.* a house, a pearl necklace, or the shares of a joint-stock company.¹ The British practice is that profits of this sort are never counted

¹ Cf. *ante*, Part II. Chapter VII. § 4.

for income-tax purposes unless they are "realised" by sale of the property. If they are realised, they are, in general, counted when to seek them is a part of the normal business of their recipients, but not otherwise. Thus, a stockbroker's profit from the purchase and sale of shares of changing value is counted as income, but any profit that a philosopher might make from this form of activity would not be counted. The Royal Commission on the Income Tax recommended a change in this respect. They inclined to make the issue depend on the intention of the income-receiver. "Any profit made on a transaction in which the subject matter was acquired with a view to profit-making should be brought within the scope of income tax, and should not be treated as an accretion of capital simply because the transaction lies outside the range of the taxpayer's ordinary business."¹ Clearly there are great practical difficulties here. These could be avoided, and, moreover, casual profits not realised though sales would also be brought into account, if property instead of income were made the object of assessment.

§ 3. Secondly, however, there is a very important respect in which property is an inferior object of assessment to its rival. If every piece of property yielded an equal flow of income every year, there would be no difference at all between a 10 per cent tax on the income derived from it and (with interest at 5 per cent) a $\frac{1}{2}$ per cent tax on the property itself. But in actual life some pieces of property do not yield a continuous equal flow of income. Thus, consider two men of equal wealth, one of whom buys with £10,000 a property reckoned to yield a permanent income of £500 a year, and the other buys for the same sum a property of equal present value reckoned to yield a series of oscillating incomes, in the aggregate of equivalent present value, but individually different in different years. Under a property tax the two men will pay equal sums to the Treasury every year; under an income tax the man with variable income will pay more when his income is large and less when it is small. Obviously, the second plan is the more convenient and the less irritating. But there is also a second and subtler difference. Suppose

¹ *Report*, p. 20.

that one of the two £10,000 properties yields, not merely an oscillating income, but an income which begins at a low figure and is destined, and known to be destined, to grow progressively larger; that, for example, there is to be no income at all for ten years and, thereafter, a perpetual income of large amount. A property tax in this case is not merely inconvenient, in that it forces a man to make payments (possibly by borrowing) before he has any income to pay with. It is also guilty of an inequity, for, since the two series of incomes have, *ex hypothesi*, the same present value, they ought to be subject to taxes of the same present value. A permanent 10 per cent income tax on the first series will have the same present value now as a permanent 10 per cent income tax on the second series: and a permanent $\frac{1}{2}$ per cent property tax beginning now on the value of the property that yields the first series will have the same present value as a permanent 10 per cent income tax on that series. But a permanent $\frac{1}{2}$ per cent property tax *beginning ten years hence* on the value of the property that yields the second series will have the same present value as a permanent 10 per cent income tax (whether it begins now on nil income or ten years hence) on the second series. It follows that a permanent $\frac{1}{2}$ per cent property tax *beginning now* on the property yielding the second series will have a substantially larger present value than a permanent $\frac{1}{2}$ per cent property tax *beginning now* on the property yielding the first series. What happens in effect is that the incomes which are to begin ten years hence are, under property taxes, assessed both when they arrive and also in anticipation of their arrival. There is here, clearly, a distributional evil.

§ 4. Finally, there remain certain considerations of administrative convenience. Against assessment on income it may be argued that, when a business man derives an income from a business which he manages himself, there are difficulties in disentangling the part of his income which is due to his investment from the part that is earnings of his work. These difficulties are so serious that in the United Kingdom it has been found necessary, as was observed in the preceding chapter, to circumvent them by treating incomes of this class

as wholly earned, in spite of the fact that this procedure is not only logically indefensible but also confers a differential favour on one form of industrial organisation, *i.e.* the private business, as against the chief rival form, *i.e.* the joint-stock company. With taxes assessed on property this differentiation would not occur. The administrative puzzle which leads to it would not, however, be solved; for, presuming that there is also in existence a tax on earned income, the earned part of a business man's income would still need to be disentangled from the unearned, or investment, part. This class of consideration, therefore, does little to help the advocates of property taxes. On the other side there are three important considerations. First, it is much less easy to make arrangements for tax graduation if there is an income tax on earned income coupled with a property tax than if the whole of everybody's income is brought under review—whether the rates on earned income and investment income are the same or different—in some form of general income tax. Secondly, whereas a tax on investment income can, by the device of taxation at source, be levied easily, cheaply and without any opening for evasion, there is no way in which that device could be applied to a property tax. Thirdly—and this is a point of great practical importance—whereas, when general rules of definition have been laid down, investment income is a thing the size of which can be determined by counting, property is a thing the size of which must be established by some process of valuation. For many sorts of property, speculative stock-exchange securities, for example, values undergo large and frequent changes, to keep track with which for taxation purposes would constitute a serious administrative problem. For other sorts, private businesses, lands, and so on, special appraisers would have to be employed, not merely at long intervals, as has to be done now for death duties, but at very short intervals. Hence, we should be compelled either to make shift with very unsatisfactory valuations or to undertake enormous trouble and expense in perfecting them. These administrative considerations are, I think, decisive in favour of the income tax as against the property tax method of assessment.

CHAPTER XIII

DEATH DUTIES AND TAXES ON INVESTMENT INCOME

§ 1. IN turning to the subject of death duties we may conveniently begin by clearing out of the way a time-worn controversy of an ethical nature. It used to be, and is still sometimes, urged that, though ordinary taxation is an unobjectionable and, indeed, an essential function of the State, taxes on the scale and in the nature of present-day death duties violate fundamental natural rights, and are thus ethically wrong. After what was said in Part I. Chapter II. on "The Principles of Compensation" I need not delay over this matter. The point of view I have been describing was refuted once for all by Sir William Harcourt in the following passage from his Budget speech in 1894: "Upon the devolution of property of all descriptions the State takes its share first—before any of the successors in title are benefited. The reason on which this is founded is plain. The title of the State to a share in the accumulated property of the deceased is an anterior title to that of the interest to be taken by those who are to share it. The State has the first title upon the estate, and those who take afterwards have a subsequent and subordinate title. Nature gives man no power over his earthly goods beyond the term of his life. What power he possesses to prolong his will after his death—the right of a dead hand to dispose of property—is a pure creation of the law, and the State has the right to prescribe the conditions and the limitations under which that power shall be exercised." ¹ Nothing further needs to be said.

§ 2. The characteristics peculiar to death duties are easily

¹ Quoted in Soward and Willard, *The Taxation of Capital*, 59.

set out. From our point of view these duties are occasional property taxes, thus standing in contrast with annual property taxes. Instead of collecting a relatively small sum from each property every year, they collect a large sum from each property at intervals averaging about thirty years and associated with the death of the proprietor. This is the essential point. The fact that some owners of property, universities and other like corporations, do not die and, therefore, would pay under property tax but not under death duties, is a minor matter and need not be considered here. In the preceding chapter it was shown that annual property taxes do not differ fundamentally from taxes on unearned, or investment, incomes.) Since these latter taxes are a well-established fiscal instrument, it will be convenient to use them, rather than annual property taxes, as a standard of comparison for our present study. It is evident that, in the matter of distribution, death duties and taxes on investment income can be so contrived as to have closely similar results. Attention may, therefore, be confined to what I have called "announcement aspects". Thus, we have to contrast, without reference to distribution, death duties designed to yield a given revenue with taxes on investment income designed to yield an equal revenue, these latter taxes being confined to incomes corresponding to the capital on which death duties are paid. In other words, we have to contrast them with taxes on investment income at rates for each several taxpayer equivalent to the rates required to yield full insurance against death duties. It being assumed, of course, that the revenue collected is employed in the same way whichever method of raising it is adopted, the comparative effects on aggregate sacrifice of adopting one or other of the two sorts of tax will then depend upon the comparative effects which they respectively produce upon work and saving. In view of the analysis carried through in Chapter V. § 7, we may fairly presume that the effects upon work will not be significantly different. If saving is affected to about the same extent, heirs, as a body, will start equally well-off on either plan, and so will have no inducement to work with different amounts of energy ;

and, even though savings are affected substantially more under one plan than under the other, the aggregate difference made to the amount of energy heirs display is unlikely to be other than small. Hence, attention may be concentrated on the comparative effects which the two plans may be expected to produce upon the volume of savings.

§ 3. Popular opinion makes short work of this problem. According to it, while all other taxes are paid, at least in part, out of economies in consumption, death duties, being taxes on capital, are necessarily paid wholly "out of capital". This is a gross confusion. Some of those who fall under the spell of it recognise, indeed, that what the government receives is not actual capital, but resources against which the taxed persons sell actual capital, and which, but for this transaction, would themselves have become new capital.¹ But the assertion that taxes on capital are necessarily paid out of resources which would have become capital is no less false than the assertion that they are necessarily paid out of actual capital. It springs from a failure to distinguish between *object of assessment* and *source of tax payment*. The object of assessment is the channel through which the source of tax payment is reached; it is not identical with it. For commodity taxes everybody recognises this. Nobody maintains that a tax assessed on beer is necessarily paid out of beer, or even out of resources which would otherwise have become beer. The position is essentially the same with income and capital. Merely to know that a tax is assessed upon one or other of these objects tells us nothing as to how far it is paid out of resources which would have been used as income, *i.e.* for consumption, or out of resources which would have been turned into new capital, *i.e.* saved. Our problem cannot be solved by means of this popular short-cut.

§ 4. As a first approach towards it it is convenient to concentrate attention upon the peculiar time-incidence of death duties, without regard for anything else. To that end let us imagine a community consisting of a number of family groups of similar wealth and income, and let us set

¹ Cf. *ante*, Part II. Chapter IV. § 7.

over against one another two systems of lump-sum taxes, under one of which £100 is taken from each family group every year, while under the other £3000 is taken from each on the occasion of the death of the head of the family, which is assumed to occur, on the average, once in thirty years. On the above assumption it is evident that the two tax-systems will yield equal annual revenues to the government. We have to inquire in what, if any, respects, their effects upon the volume of savings are different.

Now, it is easy to see that, when a tax levy is small in amount relatively to a man's annual income, a considerable part of the funds for it may easily be provided by economies in consumption. When, however, the tax levy is large—under death duties it is often equivalent to several years' income—this is impossible. A large part of the funds required *must* be provided by a sale of capital, which means, as we have seen, out of resources which would normally have become new capital. With levies made at the moment of death the case is still stronger. Since heirs as a rule look to what actually comes to them and are little interested in what would have come to them on the hypothesis that there had been no death duties, they are very unlikely to meet any part of a death-duty levy by cutting down their consumption. Even small levies made at that moment would, therefore, be paid to practically their full amount out of capital in the sense described above. *A fortiori* this will be true of large levies. Practically, we may conclude that the whole of death-duty levies will in fact be so paid; in other words, that, so far as the present argument goes, they will deplete the volume of savings by their full amount.

If we had to do with imposts required only in a single isolated year, the above result might stand without qualification. In fact, however, we are concerned with regular annually recurring imposts; and, consequently, there is another side to the picture. For, whereas in any year only about one-thirtieth of the sum total of estates become subject to tax, the fact that death duties (here conceived, it will be remembered, as simple lump-sum taxes) exist, and that all privately owned estates will eventually fall under

them, reacts, or may react, upon the conduct of the owners of the other estates. The total effect of death duties upon savings is not, therefore, determined by the fact that the actual payment of death duties is made at the expense of what would have been savings. To obtain a true comparison between large lump-sum taxes levied at death and small lump-sum taxes designed to yield the same revenue and levied annually a more difficult inquiry is needed.

§ 5. In attempting to carry this through, we have to guard against a possible arithmetical confusion. To illustrate this, let us suppose that in fact the effect on savings is the same under both systems : that of the revenue handed over to the Treasury, *e.g.* 50 millions, 30 million £s is taken out of resources which would otherwise have been saved, so that, on the assumption that the Treasury does not save but consumes its 50 millions, aggregate savings are reduced by 30 millions. Then under the death duty method living taxpayers will be seen to save and invest 20 millions more than they would have saved and invested had there been no taxation at all. But under the annual tax method living taxpayers will be seen to save and invest 30 millions less than they would have saved and invested had there been no taxation at all. Thus, if attention is focussed on a representative taxpayer under the two schemes, it *appears* that much less saving takes place under the second scheme than under the first, though at the beginning of our analysis we postulated that equal amounts should take place under both. This impossible result is due to a confused use of the terms "living taxpayer" and "representative taxpayer". The true representative taxpayer under death duties is not a living taxpayer, but an amalgam of 29 who are living and one who is just dead and subject to death duty. Unless this point is held clearly in mind we may find ourselves upholding the death-duty method by a completely illusory argument.

§ 6. The real issue is perfectly precise : will the representative man over the whole period of his life restrict his consumption as much when he knows that £3000 will be taken from his estate at death as he would do if he knew that £100 would be taken from it in every year of his life ? In

other words, will a group of thirty men, one of whom is to be taxed £3000 now, a second £3000 next year, a third £3000 a year later, the impact of the tax in each case to coincide with death, contract their consumption as much as they would have done were all of them to be taxed £100 every year? To resolve this issue let us begin by supposing that all the men concerned are completely indifferent to personal death, and are just as much interested in their heirs as in themselves. On this assumption, if everyone were perfectly rational, it would seem that the two systems ought to affect the aggregate volume of savings to an exactly equal extent. In fact, however, people are not perfectly rational. They are apt to procrastinate; to exaggerate the prospect of a long span of life for themselves; to turn their eyes away from events that lie in the future, particularly if the date of these events is unknown. For these reasons they are not likely to economise so largely to meet occasional large lump-sum payments as they would do in order to meet equivalent smaller annual payments. The circumstance that the vast majority of persons are not indifferent to personal death and are not just as much interested in their heirs as in themselves obviously reinforces this conclusion, the more so if the large lump-sum imposts are to be levied at the moment of death. Nor can the conclusion be rebutted by reference to the conduct of heirs. For, under the death-duty plan, since the former owners have economised less than they would have done under annual taxation, the heirs inherit less and so have smaller investment incomes. This may perhaps cause them to work somewhat harder—though, as urged above, this effect will be slight—but it cannot, in any ordinary circumstances, cause them to save more. I conclude, therefore, that, as between lump-sum taxes assessed on the occasion of death and equivalent lump-sum taxes assessed annually, the former are practically certain to prove more injurious to saving than the latter.

§ 7. If the relation between large occasional lump-sum taxes and death duties were precisely the same as that between small annual lump-sum taxes and taxes on investment income, it would follow that death duties are more

injurious to saving than taxes on investment income of like distributional character. In fact, however, I shall submit that the two relations are not the same, and that the excess damage, as against lump-sum levies, is certain to be substantially smaller under death duties than under the rival form of tax. The grounds of this conclusion have now to be set out in detail.

§ 8. The desire to build up capital possessions is not a simple thing. It is made up of various elements blended in various ways among different men. One element is the desire to be able to exercise the constructive force, which a strong man may find in himself, in conjunction with a large-scale undertaking: another is the desire for that power in society or, perhaps, in politics which great wealth confers: another is the desire for fame or notoriety: another the desire for a large income accruing without effort in later life: another the desire for posthumous glory in dying very rich: another mere inertia—inability to spend in consumption the whole of a large income. All these motives are concerned only with the lifetime of the man who contemplates saving under the stress of them: the fact that after his death his fortune does not also die is, so far as they are concerned, an irrelevant accident. Alongside of them there is the desire to hand on accumulated capital to his children after the accumulator's death. This desire is most urgent when a family of young children is being supported by a father out of a considerable earned income backed by little property; for the father knows that, if he dies, his children will be very badly off, so that each extra £ of property accumulated for them will have a high marginal utility. In such a case even a man who cared little for his children's *satisfaction* as compared with his own, might, nevertheless, be ready to give up many £s from his own consumption in order to provide even one £ for them. But the desire may also be strong where considerable heritable funds already exist, since these may have to be divided among a number of children, and, even if this is not so, the father may have ambitions to found a wealthy family. When, however, a man stands possessed of an estate which is already *very* large, he can hardly desire

to increase it still further for the sake of his children, and he may even reflect that too large an inheritance is likely to prove injurious to them. On the other hand, a man who is, and expects to remain, childless may still desire, though perhaps not very keenly, to have property at his death to leave to relatives, friends, or public objects in which he is interested.

§ 9. Death duties and taxes upon investment income alike are exactly equivalent to their lump-sum counterparts in the amount of money that they take from those who have to pay them. Consequently, the effects of both are the same as those of their respective lump-sum counterparts so far as reactions through the marginal utility of money in fact or in prospect are concerned; they differ from these only because the tax formulae employed involve a differential element. Since both death duties and taxes on investment income have this characteristic, the one striking accumulated savings directly, the other the fruit of these savings, it appears *prima facie* that their effects will differ from those of their respective lump-sum counterparts in equal measure. The analysis of motives that was set out in the preceding section shows, however, that this is not so. In so far as a man's motives for saving are confined to happenings during his lifetime and at the moment of his death, a death-duty levy will affect his conduct in exactly the same way as an equivalent lump-sum levy: he will save to exactly the same extent as he would have done under that type of levy. As regards the whole of this important class of motives he is not discouraged in any degree. A tax on investment income, however, strikes, not only at this class of motives, but also at the other class. Consequently, such a tax must always check saving more than an equivalent lump-sum tax. Hence, we may lay it down that the excess damage to saving caused by death duties, as compared with their lump-sum counterpart, is smaller than the excess damage done by taxes on investment income, as compared with their lump-sum counterpart. This is true even when the death duties are imposed on estates passing to the children of the decedents. The relative advantage is obviously still greater when they

are imposed on estates left to remoter relatives or to friends.

§ 10. It thus appears that, in attempting to compare the effects on saving of death duties and of taxes on investment income, designed to yield equal revenues and alike in respect of distribution, we are confronted with conflicting considerations. The lump-sum counterpart of death duties is more injurious to saving than the lump-sum counterpart of taxes on investment income; but, on the other hand, death duties are not so much worse than their lump-sum counterpart as taxes on investment income are than theirs. There are no means by which these two factors can be measured. We may, if we will, guess on which side the balance of advantage lies; but we cannot know. All that can be said with confidence is that neither of the two rival means of raising revenue is likely to be *much* superior to the other. It will not make *much* difference either to saving or to anything else whether the one or the other is chosen.

§ 11. It remains to call attention to one further point. From the concluding sentences of § 9 it is easy to see that death duties specialised upon bequests other than in the direct line, after the manner of the British legacy and succession duties,¹ are, in respect of a given levy distributed in a given way, less injurious to saving than general death duties. An extension of this line of thought leads naturally to Professor Rignano's proposal that a man's savings, when left by him in the first instance, should pay one rate of duty, and that, when left a second time by his legatee to the legatees' heirs, they should pay a higher rate of duty. The theoretical basis of the proposal is the presumption that most men will care very little about the fortunes of the heirs of their heirs, and that, therefore, other things being equal, death duties at the second remove, so to speak, would enjoy

¹ These duties are assessed upon the amount received by beneficiaries without reference to the aggregate size of the estate passing at death. They are at the rate of 1 per cent when the beneficiary is the husband, wife, or lineal issue or descendant of the author of the benefaction, subject to certain exceptions; 5 per cent when the beneficiary is a brother or sister or a descendant of a brother or sister; 10 per cent in all other cases. (Cf. *Report of the Committee on Taxation and the National Debt*, p. 195.)

the same kind of advantage as duties on bequests out of the direct line. This is, I think, certainly true; and it follows from it that, provided the practical difficulties could be overcome, the compound type of death duty contemplated by Professor Rignano, or some variation of it, would enable a given revenue to be raised with somewhat less damage to saving than is possible under death duties of the ordinary type. There is, of course, no reason why the Rignano plan should not be superimposed upon arrangements providing for progression in tax rates as the size of estates increases and for differentiation between the rates charged on legacies to the testator's children and on legacies to other people.

§ 12. The practical difficulties in the way of this plan are, however, very serious. The first heir might be tempted to squander his legacy or to dispose of it by gifts *inter vivos* to such effect that, when he died, his inherited property and his earned property together would be insufficient to pay the tax due on his inherited property. Moreover, it would be very difficult to allow properly for changes in the value of the inherited property when that property and property newly created by the first heirs were mixed together. If no allowance were made, and the inherited property had fallen in value, owing either to a general cause such as a rise in the rate of interest, or to a cause special to the property itself, a portion of the first inheritor's savings sufficient to make good the depreciation in the value of his inherited property would find itself, contrary to Rignano's intention, treated at his death on the same footing as that property. These difficulties might, indeed, be met by a rule requiring all legacies to be "settled", in such wise that the heirs could neither spend the principal nor, except under close restrictions, shift it from one form of investment to another. Rules of this kind would, however, obstruct the free movement of capital in ways that might prove injurious to enterprise. Attention may, therefore, be directed to an ingenious alternative plan recently suggested—apparently independently—by Dr. Dalton and Mr. H. D. Henderson. This plan proposes that, when an estate passes at death,

there should be levied on it one death duty of the ordinary sort and also a second death duty in respect of its next descent. Against this second death duty, however, the State would pay to the first heir during his lifetime an annual sum representing interest upon it, so that he would not suffer and, until he in turn died, the State would not gain. At his death the State would stop paying interest, and so would hold the principal of this second death duty free, so to speak, of mortgage. This plan would dispense with the need for compulsory settlements. Mr. Henderson suggests that the rate charged in respect of the second death duty should depend, not on the aggregate amount of the fortune left, as the rate of the primary death duty would do, but, as against each separate legatee, on the amount of the fortune accruing to him. This, however, is not essential to his plan.¹

¹ Cf. Henderson, *Inheritance and Inequality*, pp. 17-26.

CHAPTER XIV

TAXES ON THE PUBLIC VALUE OF LAND

§ 1. It has become apparent in the course of our study that, when a tax is assessed on anybody by reference to the value of some object in his possession of such a sort that that value cannot be altered by any action on his part, the tax, in its announcement aspect, works like a poll-tax and is, in that aspect, an ideal tax from the standpoint of least aggregate sacrifice. In order that it may possess this quality it is not necessary that the object of assessment should be inalienable by the present owner. He may be free to sell it—of course at a price diminished by the discounted value of the tax—and the tax will remain, in its announcement aspect, wholly innocuous. The essential point is that the object of assessment is such that its value, and, therefore, the amount of the impost to be collected, cannot be altered by anything that the owner, whoever he may be, decides to do.

§ 2. Now, if we select any piece of durable property, determine its value in 1926, and decree that henceforward its owner shall pay a tax based on that value, we have an object of assessment of the type contemplated above. There is, however, a certain appearance of absurdity in basing taxes on historical values of this kind. It is easy to imagine how anomalous taxes so based would seem when they had continued for 100 years. In practice, if any value is to be taken as an object of assessment for taxation, it must be current, or, at all events, very recent value. The values of all ordinary sorts of property are, however, liable to be altered by work or investment on the part of the owners or occupiers. Taxes assessed upon them will, therefore, vary

in amount according to what these persons do, and, therefore, will react upon their conduct. Thus these taxes do not conform to the poll-tax type. There is, however, one current value, taxes upon which do so conform. This is what is called in Australia the "unimproved value" of land.

§ 3. In Great Britain up to the present time, apart from the small "undeveloped land" duty of the 1909 Budget, no resort has been had to this taxable object. In New Zealand and the Australian colonies, however, it has for many years played an important part both in local and in national finance; and the municipalities of Western Canada have made considerable use of it for local purposes. "In Queensland practically all the local revenue is raised from this source. All rates, general, special, and separate, are levied on the unimproved value."¹ In South Australia a special national tax on unimproved land values has existed since 1884. One halfpenny in the £ is levied on all unimproved (capital) values; an extra halfpenny on unimproved values exceeding £5000; and an absentee tax, amounting to 20 per cent, on absentee owners.² In New South Wales: "The land tax of the State is levied on unimproved value at the rate of 1d. in the £. A sum of £240 is allowed by way of exemption, and, when the unimproved value is in excess of that sum, a reduction equal to the exemption is made; but, when several blocks of land within the State are held by a person or company, only one amount of £240 may be deducted from the aggregate unimproved value. In cases where land is mortgaged the mortgagor is permitted to deduct from the tax payable a sum equal to the income tax paid by the mortgagee on the interest derived from the mortgage on the whole property including improvements."³ In New Zealand: "In 1891 the Property Tax Act then in force was repealed and replaced by the Land and Income Assessment Act, under which a land tax was imposed on land and mortgages of land, and an income tax on all income other than income derived from land and mortgages of land. Improvements on land were exempted up to £3000. In 1893 an amending Act was

¹ Schefftel, *The Taxation of Land Value*, 1916, p. 49.

² [Cd. 3191], p. 20.

³ [Cd. 3191], p. 21.

passed by which all improvements on land were entirely exempted, and in 1896 an Act was passed by which the principle of taxation on the 'unimproved value' was extended to local rating, by enabling local authorities to adopt the system on a poll of the ratepayers being taken and a majority voting in favour of its adoption."¹ The amount of the national tax in this colony is ordinarily one penny in the £ on unimproved (capital) value. "Land in possession of natives is treated specially, and, out of consideration for small peasant farmers, plots worth less than £500 are exempted and plots worth less than £1500 are allowed an abatement. In addition to the ordinary land tax, the same Act imposed a graduated State tax on large estates, commencing at one-sixteenth of a penny in the £ on land of an unimproved value of £5000, and rising to threepence in the £ on land of an unimproved value of £210,000 or more."²

§ 4. In all these arrangements the essential matter is the distinction between improved and unimproved value. Some light on the precise way in which this distinction is drawn may be gathered from a very interesting explanatory memorandum furnished by the Valuer-General of New Zealand, Mr. G. F. C. Campbell. Mr. Campbell cites the definition clauses of the Government Valuation of Land Act, 1896, and adds certain comments of his own. The principal points to be noted are the following :

First : "The increased value attaching to any piece of land due to the successful working of other lands in the district or to progressive works effected by the State, the general prosperity of the country, high markets for produce, etc., form a portion of the unimproved value under the New Zealand law. Any increased value, however, which is represented by the improvements effected by the individual possessor, either past or present, does not form part of the unimproved value."³

Secondly : "Improvements can only be valued to the extent to which they increase the selling value of the land. This

¹ [Cd. 3191], p. 24.

² Chorlton, *The Rating of Land Values*, p. 160.

³ [Cd. 3191], p. 37.

fact should not be forgotten; the valuer must, therefore, value an improvement at the proportionate sum which it represents in the selling value of the whole property. We sometimes find a large house built on a small area of farming land. The ordinary farmer who would purchase such a property would not be likely to pay for the house anything approaching its cost—he would only pay the price of a house which suits the requirements of the farm. The selling value of the house must, therefore, be valued at what the ordinary purchaser would be likely to give for it, or, in other words, at the sum by which it increases the selling value of the property. Sometimes an owner will expend his capital and labour injudiciously, and the result will prove detrimental to the land instead of being an improvement. Some lands hold grass better without first being ploughed than they do after the plough. The effect of ploughing in such cases would not be to improve the selling value. Some improvements, such as ornamental shrubbery, orchards, lawns, vineries, etc., rarely increase the selling value to the full extent of their cost, and should, therefore, be valued accordingly. . . . No work can be considered an improvement if the benefit is exhausted at the time of valuation. . . . The amount at which improvements are to be valued is defined by the Act as the sum by which they increase the selling value of the land, *provided that the value must not exceed the cost*, although it may be below the cost if their condition warrants it. The cost of an improvement is not necessarily its selling value, as its suitability and condition must be taken into consideration.”¹

Thirdly: “It is the actual improvement which is valued, not the effect of that improvement. For instance, suppose that the expenditure of a small sum in cutting an outlet for water has converted a swamp into first-class agricultural land. The fact that the swamp was capable of easy drainage would enhance its unimproved value, and the cost only of cutting the drain would be valued as the improvement.”²

Lastly: An improvement, to be classed as such, must be made by the owner. Suppose that there are two pieces of

¹ [Cd. 3191], pp. 39-40.

² [Cd. 3191], pp. 40-41.

land adjacent to one another, and that the cutting of a drain or the erection of a fence upon one of them would enhance the total value of both. If the two pieces are owned by the same person, their unimproved value, both before and after the drain is cut, would appear to be equal to their total value *minus* the cost of cutting the drain. If, however, they are in different hands, the unimproved value of the piece on which the improvement is not required is enhanced so soon as the improvement on the other piece is carried out. The same point arises in connection with collective improvements. Thus, Mr. Campbell observes: "It has been argued that public works done by small communities, and for which those communities agree to rate themselves, shall be valued as an improvement" for the purpose of the national land tax.¹ The New Zealand Act, however, does not accept the view.²

§ 5. The general nature of the distinction between improved and unimproved value has long been familiar to economists. It corresponds to the Ricardian distinction between true economic rent and profits from capital invested in land. Unimproved value is the capitalised value of the true rent, and improvement value that of profits. A terminology for some purposes more convenient was suggested some years ago by Marshall. True rent is that part of the annual value of land which arises from its position, its extension, its yearly income of sunlight and heat and rain and air. "This (annual) value of the land", he wrote, "is sometimes called its 'inherent value'; but much of that value is the result of the action of men, though not of its individual holders; and, therefore, it is perhaps more correct to call this part of the annual value of land its 'public value', while that part of its value which can be traced to work and outlay by its individual holder may be called its 'private value'".³ Public value capitalised corresponds to the unimproved (capital) value, and private value capitalised to the improvement (capital) value of the Australasian laws.

§ 6. Having thus found in the unimproved or public value

¹ [Cd. 3191], p. 40.

² For an account of some of the difficulties of valuation, cf. Scheftel, *The Taxation of Land Value*, pp. 69 *et seq.*

³ *Memorandum on Imperial and Local Taxes* [Cd. 9528], p. 115.

of land a taxable object, which, from the standpoint of "announcement", conforms perfectly to the principle of least aggregate sacrifice, we have now to inquire how far it conforms to that principle in its distributional aspects. In attacking this problem, we have to apply the general method of Chapter IX. §§ 9-13 to the facts of this particular case. In this country, among people at any given income level, the proportions in which their incomes are drawn from the public value of land vary enormously. One rich man's income is made up almost entirely of rents, another's contains scarcely any rents. Hence, as between persons of equal incomes, this type of tax will act very unequally, and, so far, will be distributionally bad. On the other hand, the ownership of rents is in this country concentrated in a high degree upon rich people. Hence, as between people of different incomes, this type of tax is distributionally good; probably considerably better than an income tax on the present English scale. We are hardly in a position to say whether, when both these factors are taken into account, it is distributionally better *on the whole*.

§ 7. There is, however, a special consideration which commends this type of tax up to a point from the side of distribution. It is, in a measure, preventive of distributional evils which government expenditure of taxation otherwise tends to bring about. Thus Marshall wrote: "There may be great difficulty in allocating the betterment due to any particular improvement. But, as it is, the expenditure of such private societies as the Metropolitan Public Gardens Association, and much of the rates raised on building values for public improvements, is really a free gift of wealth to owners who are already fortunate."¹ It is true, no doubt, that those who have purchased urban land recently may have partially discounted this betterment in their purchase price; but they are not likely to have discounted it entirely; while those owners who are not recent purchasers will not have discounted it at all. Consequently, it is to be expected that the special burden which new taxes upon site-values would impose upon site-owners—at all events in urban districts—

¹ *Memorandum on Imperial and Local Taxes* [Cd. 9528], p. 125.

would be partially offset by a special increment in no way due to their own effort and expenditure.

§ 8. In view of the excellence of a tax on the public value of land from the standpoint of announcement we should plainly need proof that it was abnormally bad distributionally before being justified in rejecting its claims to a place in the tax system. If it were proposed to put a very high rate of duty upon the annual—still more upon the capitalised—public value of land, owners of valuable sites would, indeed, have ground for complaint that *gross* discrimination was being practised as between them and other equally wealthy persons. Even with a fairly low rate of tax the discrimination may be considerably more important than it is at all likely to be in the case of, say, a tea tax; because some persons draw a proportion of their income from true rents larger than the proportion of their income that *any* persons spend on tea. Moreover, taxes on true rents, if imposed with an expectation of continuance, are apt to become amortised: that is to say, the present owners of land, if they wish to sell their property, are forced to accept a purchase price reduced by the discounted value of the *future* annual imposts. When this happens they are hit, *pro tanto*, with greater severity. This is a sound reason against imposing very high rates of tax on true rents.¹ It is of little weight, however, against low or moderate rates; for, after all, *every* single tax taken by itself is bound to be in *some* degree unfair between individuals. On the whole, therefore, I conclude that, in any tax system which relies on a number of different imposts, there is a strong case for including among the rest a moderate tax assessed at a moderate percentage upon the (annual) public value of land.

¹ If a tax of this sort is in existence and has been in existence long enough for a large *proportion* of the affected property to have changed hands by sale or inheritance, these same considerations constitute a strong argument against remitting it; for, just as the imposition of the tax mulcted one arbitrarily selected set of men who are to receive no compensation, so the removal of it gives a present to another arbitrarily selected set who have suffered no previous hurt. It is with this consideration in mind that Marshall writes: "Any relief as regards old rates should, therefore, apply only to new buildings and other fresh investments of capital" (Marshall, *Memorandum on Imperial and Local Taxes* [Cd. 9528], p. 121).

CHAPTER XV

TAXES ON MONOPOLY REVENUE

§ 1. It is a commonplace of economic text-books that, when a monopolist is making full use of his monopolistic power over prices, a tax assessed upon monopoly revenue will not affect in any way his or anybody else's conduct. Hence, this kind of tax, like a tax on the public value of land, is, in its announcement aspect, ideal. Again, then, we turn at once to distributional aspects. As with taxes on the public value of land, so also with these taxes, people who happen to possess shares in monopolistic concerns are treated unequally as against people with like incomes whose investments are in other things. Nor can this inequality be excused by the argument that shareholders in monopolistic concerns are making an income "unduly" large relative to their investment: for most shareholders will have bought their shares in the market at prices in which the high returns, if there are such, due to monopolistic exactions are already discounted. To set against this distributional evil, as between people of similar economic situations, there is the fact that many of the persons interested in monopolistic concerns are wealthy, so that, as between people of dissimilar economic situations, monopoly revenue taxes are, *pro tanto*, distributionally good. Perhaps, too, it may be claimed for such taxes that, in some measure, they discourage people from attempting to form monopolies with a view to exercising monopolistic power over prices.

§ 2. If, then, the State takes no direct steps to prevent the mulcting of the public by the exercise of monopolistic power, there is a good *prima facie* case for the imposition

of taxes—and high taxes at that—upon monopoly revenue, i.e. that part of a monopolist's income which results from the exercise of monopolistic power in forcing selling price above supply price. The exercise of monopolistic power is, however, in general, highly anti-social, since it involves deliberately restricting the output of the monopolised good below the most advantageous output.¹ Though, in respect of the output which is actually produced, the loss which the public suffers through high prices is offset by an equivalent gain to the monopolist, in respect of the output which high prices prevent from coming into existence there is a loss of consumer's surplus unbalanced by any gain. Hence it will, in general, be more in the interest of the community as a whole for the State to prevent the exercise of monopolistic power than to permit it and to tax the proceeds. Even if the tax were approximately a 100 per cent tax this would be so. In that case the monopolist would secure nothing out of his exactions, the whole of what he had tried to gain going to the State. But the tax would be equivalent to a tax assessed on the commodity at the rate calculated to yield maximum possible revenue: and it is easy to see that a tax on any assessable object at so high a rate as this tends to inflict an abnormal amount of sacrifice on the community relatively to the revenue which it yields. For the State to allow monopolists to mulct the public and then to force them to disgorge to it a part, or even the whole, of their spoils is, therefore, only defensible where the better policy of preventing an anti-social exercise of monopolistic power is not politically practicable.

¹ Cf. *The Economics of Welfare*, chap. xvi.

CHAPTER XVI

TAXES ON WINDFALLS

§ 1. By windfalls I mean accretions to the real value of people's property that are not foreseen by them and are not in any degree due to efforts made, intelligence exercised, risks borne, or capital invested by them. In the present chapter I propose to consider taxes assessed upon these objects. It is apparent immediately that in their announcement aspect such taxes conform to the ideal, for they take the same given amount of money from the taxpayer without reference to his conduct in any respect. What is to be said of them in their distributional aspect?

§ 2. It is possible to imagine a community in which, by a miraculous dispensation of Providence, windfalls are so distributed that large ones always go to poor people, moderate ones to men of middle incomes, and none at all to rich people. In actual life there is no reason to suppose that anything of this sort happens. On the contrary, if any general presumption can be made, it is that rich people are more likely to enjoy windfalls than anybody else, because most windfalls consist in unlooked-for changes in the value of some piece of material property, and pieces of material property are, in the main, owned by rich men. We have, therefore, no ground for supposing that windfalls as a whole are good for distribution or that taxes upon them would be distributionally bad. Something might be said, if it were administratively practicable, for exempting from taxation any windfalls (of moderate amount) that fall to poor people: but, apart from this, in so far as true windfalls can in practice be isolated, the general considerations set out in this volume point towards heavy taxation—perhaps 100 per cent taxation—of all of them.

The principle of this matter is thus clear, and discussion may be confined to particular applications.

§ 3. It is necessary to distinguish first between what may be called integral windfalls and partial windfalls. By an integral windfall is meant an accretion, in the nature of a windfall, to the aggregate value of a person's property reckoned relatively to the whole period of his life; by a partial windfall an accretion of this nature occurring at some definite moment to some definite part of a person's property. The distributional soundness of a tax upon integral windfalls has already been recognised. But with partial windfalls the issue is less clear. For a windfall increment to one part of a man's property in one year may be offset by a windfall decrement to another part of it in another year. If there were a presumption that an observed windfall increment would in fact be balanced by a windfall decrement that is not observed, distributional considerations would point against the taxation of partial windfalls. Integral windfalls would be proper objects of taxation, but partial windfalls would not. Since in practice it is quite impossible to ascertain by direct inquiry whether or not an integral windfall has occurred—for this would imply knowledge of the future as well as of the past—or, if it has, how large it has been, this conclusion would, in effect, rule all windfall taxation out of court. There is not, however, in fact, any presumption of the kind contemplated. When a partial windfall increment is observed, it *may*, of course, be cancelled by a partial windfall decrement to the same property; but there is no presumption that it will be. Consequently, in the absence of definite knowledge that it is in fact so cancelled, we need not hesitate to tax it. Those windfalls that are observed are not rendered improper objects for taxation by the fact that windfall decrements and other windfall increments occur, which cannot in practice be brought into account.

§ 4. The exceptional circumstances of the Great War brought into being a new and very important class of windfall, in the abnormal profits made by certain businesses as a direct consequence of it. The values of certain sorts of goods and services were enormously enhanced, with the

result that those persons who had a store of these things or the means of making them quickly—shipowners, iron and steel makers, munition makers, farmers, and many others—were in a position, except in so far as the government interfered by fixing maximum prices for the commodities in which they were interested, to reap undreamt-of fortunes. In these fortunes there was a large element of windfall. In order to isolate that element it was necessary to determine what the normal profit of the business was, to add on to that an allowance for extra profit due to new capital investments and additional work, and to take account of the fact that machinery set up and adaptations made specially for war purposes would be of little use, and might even be in the way, after the war was over. The estimate of normal profits ought strictly to have taken account, not merely of what the profits in the years immediately preceding the war actually were, but also of the prospects that then existed of their increasing. It ought further to have taken account both of the high level of general prices prevailing during the war, in consequence of which a given money profit represented a much smaller real profit than before, and also of the probability that prices would be high for some time after the war, in consequence of which larger reserves should properly be held against depreciation. The English excess profits duty aimed, in a general way, at isolating the windfall element in war profits on these lines and at taxing this element at as high a rate as possible ; the only restraining influence being the fear that, since it was not possible completely to isolate the windfall element, a tax above, say, 80 per cent would discourage enterprise in a dangerous degree.¹

¹ The original American excess profits duty was based on the absolute rate of profit, not on the excess above the profits obtained before the war. It was, therefore, much less nearly a true tax on windfalls than the English tax. It was, moreover, open to the serious objection that it penalised inventions, the skilful seizing of opportunities and good management. "Something can be said for a graduated tax on income; something can even be said for a graduated tax on capital; but it is difficult to say anything in defence of a tax which is graduated on the varying percentages which income bears to capital. To penalise enterprise and ingenuity in a way that is not accomplished by a tax on either capital or income—that is the unique distinction of the law" (Seligman, "The War Revenue Act," *Political Science Quarterly*, March 1918, p. 29).

§ 5. (Windfall taxation, as an instrument for raising revenue in normal conditions, was until recently practically unknown. Some years before the war, however, several attempts were made on the Continent of Europe to tax windfalls of a particular kind, namely those in respect of the public value of land, by means of increment duties. In Frankfort-on-Main, "if, since the previous change of ownership less than twenty years have elapsed, and if there has been an increase in value amounting to at least 15 per cent of the previous purchase price, after allowance has been made for expenditure on improvements, loss of interest and costs of transfer, increment duty is levied on the following scale : 2 per cent on the increase in value for increases between 15 and 20 per cent, 3 per cent for increases between 20 and 25 per cent, and so on, 1 per cent being added to the rate of duty for every 5 per cent increase of value, up to a maximum rate of 25 per cent." ¹ In Cologne the general arrangements are similar. The scale of duty starts at 10 per cent for increases of value of more than 10 and less than 20 per cent, and the rate increases by 1 per cent for every additional 10 per cent in the increase of value, up to the same maximum rate of 25 per cent. This scale is charged in its entirety when not more than five years have elapsed since the previous change of ownership, two-thirds of the scale when not more than ten years have elapsed, and one-third in respect of any period exceeding ten years.² In 1911 the Conservative party in the Reichstag carried a proposal for the introduction of kindred arrangements into the Imperial fiscal system, but "by the amendment of the law in 1913, the revenue accruing from the Wertzuwachssteuer was relegated entirely to the States and local authorities". ³ In the United Kingdom a cruder form of duty upon increments of land value was imposed by the Budget of 1909. (It might be thought at first sight that these duties satisfy the conditions required of windfall taxes, and that nothing more complicated is necessary. This, however, is not really so ; and it is desirable to show why it is not so. We shall thus be able to bring into clear light the

¹ Cf. [Cd. 4750], p. 21.

² *Ibid.* p. 18.

³ Scheffcl, *The Taxation of Land Value*, p. 145, footnote.

practical difficulties by which any attempt to devise effective windfall taxes is confronted.

§ 6. To begin with, there are two classes of increment which are apparent and not real. One of these arises in this way. If the general level of prices during one decade is 50 per cent higher than in the previous decade, then the money value of unimproved land may increase 50 per cent and yet not experience any real increment. The income that the owner derives from it, or the capital sum that he would obtain by selling it, though 50 per cent larger than before in terms of money, is exactly the same as before in terms of the things which this money enables him to buy. This sort of difficulty does not exist as against *ad valorem* taxes, but it must exist wherever the taxed object is the difference between the money value which a particular thing has at different points of time. The only way to avoid it is to revise the valuation assigned to the basis period in the light of the new level of general prices which exists in the period when the amount of increment liable to duty has to be determined. This revision would be a difficult task. The method of performing it that naturally suggests itself is to multiply the original site value by the ratio which an ordinary index number of general prices in the assessment year bears to the corresponding index number in the original valuation year. This method, however, would not be satisfactory, because the capital value of an instrument of production does not vary in correspondence with the income derived from it in a single year, but depends upon the expectation of income for a number of years. Nevertheless, by a reasonable, and not a mechanical, application of index numbers, it would seem that a competent authority could eliminate from the field of taxation the main part of the merely apparent increments of this class that come into being. By a similar process, though here much popular prejudice would have to be overcome, a competent authority might be able, in times of depressed prices, to bring into the field of taxation real increments of value which appeared as decrements. When currency values are changing with the violence recently experienced in Germany, Austria and Russia, the whole basis of this sort of taxation is destroyed.

For its practical application reasonably stable currency values are essential.

§ 7. (The other class of apparent increment arises when the general rate of money interest on long-period investments falls. This kind of change means that an investment yielding exactly the same annual return must rise in capital value. Such a rise is of no advantage to the owner of the investment—unless, indeed, he wishes to turn the proceeds into consumable income—because, even if he sells it, he will not be able to invest the proceeds in anything that will yield, on equal security, a higher annual return than he was obtaining before. Here, again, adjustment would be difficult. But, if account were taken of the place occupied by the year of the original valuation and the year of assessment in their respective credit cycles, it would seem that a competent authority could so qualify the original valuation that the increments assessed to taxation should not include this class of apparent increment.)

§ 8. (Our task, however, is not completed when apparent increments have been eliminated. For even real increments, when they are anticipated and discounted, are not windfalls. The point may be put in this way. The capital value of a site is the present worth of the annual income which it is expected to yield. Increments in capital value must, therefore, arise regularly as the date at which an increase in annual value will begin draws nearer. For simplicity of illustration, let us imagine an estate, which is not expected to yield any income at all for the next twenty years, but is, thereafter, expected to yield an income (apart altogether from expenditure on the land) of £500 a year. This example is typical of the condition of much land in the neighbourhood of towns, which is expected at a future date to become valuable for building purposes.) Interest being reckoned at 5 per cent, a simple calculation shows that the capital site value of our imaginary estate will progress approximately as follows :

Value in 1920	.	.	.	£3,800
" " 1925	.	.	.	4,800
" " 1930	.	.	.	6,100
" " 1935	.	.	.	7,800
" " 1940	.	.	.	10,000

The increment of value over the fifteen years following 1920 is thus £4000, and a duty of 20 per cent on this increment, payable in 1935, is £800. A further simple calculation shows that, with interest at 5 per cent, £800 in 1935 is equivalent to a little less than £400 in 1920. This means that, if an owner wished to sell the estate we have been considering in 1920, the existence of a 20 per cent increment duty payable in 1935 would cause him to get some £3400 for it instead of £3800. (The tax, in short, would be a direct impost on the present owner, and not in any sense a windfall tax.)

§ 9. In practice, of course, many actual increments of value are partly windfalls and partly increments of this kind. When the element of appearance in actual increments has been removed, it is possible to distinguish the windfall element in the real increment in the following manner: If a piece of land in 1920 has a total value $(x+y)$, made up of a value x due to its present (agricultural or other) use, and a value y due to expectations of building rents after 1940, there should, interest being reckoned at 5 per cent, be a non-windfall increment in the value of the land by the year 1935 equal to about 108 per cent of y . In order, therefore, that increment tax may be confined to windfalls, it ought only to be levied on the excess of the then value of the land over its present value now *plus* 108 per cent of that portion of its present value which is due to its prospects as building land. For periods of greater or less length than fifteen years similar calculations could, of course, easily be worked out. The root idea of this plan was embodied both in the increment duties established at Frankfort and Cologne and also in the German Imperial increment tax. The fourth section of the Frankfort bye-law, for example, provided that, "in the case of unbuilt-on land which the vendor does not himself use for purposes of agriculture or industry," before the increment which has accrued at any time is calculated, there shall be added to the original basis valuation interest at the rate of 4 per cent.¹ Compound interest was, however—it would seem incorrectly—not allowed.

¹ Cf. [Cd. 4750], p. 21.

§ 10. Yet one more point remains. In some circumstances an increment, which is not definitely expected, nevertheless enters, in some measure, into present value, and is, therefore, not true windfall. I may, for instance, have a piece of land which is expected to yield for a long while £500 a year, but in regard to which it is recognised vaguely that either a rise or a fall may take place. This land—with interest at 5 per cent—will have a capital value of £10,000, and it, therefore, seems at first sight that the possibility of its rising in value is not being discounted. In reality, however, this possibility does enter into present value, acting there as a counterweight to the possibility of a fall. The measure of influence which this possibility, reckoned over the ensuing fifteen years, exercises upon present value is given by the sum for which the right to all increment of *this class*—I am not, of course, now referring to the anticipated increment already discussed—accruing during the said fifteen years could be sold. It is fairly certain that the sum obtainable would, in general, be a very small fraction of the capital value of the land. Consequently, these increments are *predominantly*, though not entirely, windfalls; and the passing of a law now for their taxation if and when they accrue would not strike present owners to any substantial extent. In order, however, to reduce the risk of this to a minimum, it might be well to provide for the exemption from duty of increments amounting to less than 10 per cent. This provision, combined with that suggested in the preceding section, would exempt from increment duty all increments arising in a fifteen-year period amounting to less than 10 per cent of the value x , plus, say, 120 per cent of the value y .

§ 11. (The various safeguards, which this discussion shows to be required in an increment tax that is to strike windfall increments only, are probably too complicated for practical politics. The cause, however, is not yet lost. For it is still possible, at the expense, indeed, of letting some real windfalls go free, to avoid any serious risk of taxing increments that are not windfalls by the simple device of exempting all increments other than those which are very large. In normal circumstances, apart from war and its aftermath, we

may reasonably expect that no enormous variations in general prices or in the general rate of interest will occur in the course of fifteen years. If, therefore, we decree that increment duty shall only be levied on land which in fifteen years has trebled in value, or, if our period be of some other length, has improved in a proportionate degree, it is very unlikely that anything other than true windfall increments will be enmeshed by our scheme. Nearly the whole amount by which, at the end of fifteen years, the unimproved value of any man's holding of land—it seems necessary to take the *total holding as our unit*—exceeds treble its original unimproved value might safely be taken by the State. If the unimproved values of land are periodically estimated for some other purpose, with a view, for example, to a direct tax on the body of these values, it should not prove a very difficult or expensive matter to collect a tax of this kind also. But the various complications, to which attention has been called, make it plain that such a tax is never likely to yield a large revenue from windfalls that accrue in landed property. The task of constructing a tax to catch analogous windfalls in other kinds of property, with the single exception of treasure trove, is so difficult that no attempt has yet been made to cope with it.¹

¹ There is no resemblance between the arrangements discussed above and the German "property increment" tax introduced in 1913, which hit increments of property, whether inherited or saved, while exempting the general corpus of possessed property. (Cf. Cohn, *Economic Journal*, 1913, p. 543 *et seq.*)

CHAPTER XVII

INTERNATIONAL REACTIONS OF DOMESTIC TAXES

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§ 1. UP to this point I have taken no account of international relations, but have argued as though we had to do with a single isolated and self-contained community. When this assumption is removed, several new and large problems arise. The first of these concerns modifications in the effects of taxes, as considered in the preceding chapters, that may result from there being an outside area to which these taxes do not apply. For, when such an area exists, it may be feasible for a man subjected to taxation in the taxed area to make use of the untaxed area in such a way as to reduce the fiscal burden imposed upon him. *Prima facie* two sorts of reaction are liable to be set up. First, capital, which would otherwise have been invested in the territory of the taxing authority, may be driven abroad. Secondly, persons, who would otherwise have worked and lived within that territory, may be driven abroad. Plainly, in so far as either of these things happens, the revenue yielded by taxes is made smaller than it would otherwise have been, and also, the sum of net (post-tax) income having been diminished, economic welfare in the community is likewise diminished. More generally, the process of raising a given revenue inflicts further damage in excess of that considered hitherto. New and so far unexamined dangers are threatened. It is clearly important to gauge, so far as we can, the scope and range of these in the particular case of our own country.

§ 2. Much stress is laid in popular discussion upon the risk that high British taxation, particularly high income tax, may "drive capital abroad". Clearly, a resident abroad can

avoid British income tax on the proceeds of investments here by not making investments here; and, therefore, in the absence of international agreements to obviate double taxation, high British taxation on investment income must, *pro tanto*, impede the influx of foreign capital. Since, however, this country is, on the whole, not a capital-importing country, but a capital-exporting country, *this fact is of small practical importance.* The reaction that matters is not the reaction on foreign-owned, but on British-owned, capital. Here popular fears in great part arise out of a mistaken belief that a British citizen can escape British income tax on his investment income by merely investing abroad instead of at home. This is not so. A person technically resident in England is liable to British income tax in respect of the whole of his income, wherever it arises; even, under the Act of 1914, of that part of his foreign income which is not brought home but is re-invested abroad.) The result is that, if, while continuing to reside in England, he makes investments abroad, he will not only not escape British income tax, but will find himself subject both to that income tax and also to the income tax, if any, of the country in which he makes his investment. Under a recent Act income derived by British residents from investments in the British Dominions is subjected to British income tax at only half the current rate; the purpose being to mitigate the discouraging effect of double taxation upon inter-Imperial investment. But even here there is no question of a British resident being allowed, while continuing a British resident, to reduce the aggregate amount of his tax burden by making investments outside the country. (No doubt, a man who wishes to break the law and avoid taxation by perjury may be able to do this more easily when his income originates outside than when it originates inside the national borders. Apart from fraud, however, a British citizen can gain nothing by investing abroad rather than at home, so long as he himself remains a resident here. High taxation has no tendency to drive British capital abroad otherwise than in company with its owners.)

§ 3. The position is substantially the same as regards

driving British work, mental or manual, abroad. A person who is resident in England—in the sense that he lives in England for not less than six months of the year, or maintains a house in England—is liable to British income tax on the proceeds of his work, wherever this is performed. Hence, if he wishes to avoid the tax, he must not merely transfer his work but also abandon British residence. Hence, for capital and work alike, the crucial question is whether and how far high taxation here is likely to induce people to abandon British residence.

§ 4. There is a strong surface tension holding people to their native land, which it needs a strong force to overcome. For poor persons taxation is, in general, a small item in their total economic situation and is not likely to play any significant part in determining their action in this matter. For rich persons, on the other hand, for whom taxation *may* loom large, the advantages to be obtained from a big income consist, in considerable measure, of social amenities which would be sacrificed if British residence were abandoned. Moreover, in the present state of the world, such persons will not easily find countries suitable to their way of life, residence in which will not also render them subject to large taxation; so that what they gain by leaving England they will, in large part, lose again by entering their new home. On the whole, therefore, we may conclude that, in the present state of the world, no very serious reactions in driving either British capital or British work abroad need be looked for as a result of our high taxation.

CHAPTER XVIII

TAXING THE FOREIGNER BY DIRECT TAXES

§ 1. THE next problem to which the separation of the world into different national groups gives rise is concerned with action by the government of one group designed to exact a contribution to its revenue from the subjects of other governments. Exactions of this sort are *prima facie* practicable either through the machinery of direct taxes or through import or export duties. What need be said under the latter head is reserved for the chapter that follows. In the present chapter I shall briefly consider contributions secured through direct taxes.

§ 2. At the outset we encounter a difficulty of definition : what precisely constitutes a "national group" ? For the present purpose it cannot be defined simply as all persons owing political allegiance to a sovereign ; for, apart from the fact that in certain rare circumstances the same man may be claimed as a national by more than one government, it is plain that a British subject, for example, living permanently in Rumania and deriving all his income from there belongs, for economic purposes, to the Rumanian, and not to the British group. Reflection along these lines suggests that a national group is best defined as all persons resident in the territory covered by its government. This, however, is only a first step ; for, since people often move about from place to place, residence is an ambiguous term. Mr. Smith has one house in England, another in Germany, spends one month each year in each of them and, during the other ten months, is annually occupied in travelling round the world : where does Mr. Smith reside ? Knots of this kind cannot be

unravell'd : they must be cut by adopting some more or less arbitrary convention. Since, however, the vast majority of persons live habitually in the same country with only occasional visits abroad, the precise significance given to the term residence—for individuals¹—is not, for our purpose, important. People who habitually reside outside this country are non-residents, and non-residents are, for that purpose, foreigners.

§ 3. It is in the power of a government to collect revenue by direct taxes from persons not subject to it, if these persons either come themselves within its territory during any part of the year or draw from its territory any part of their income. Thus, personal taxes may be laid on tourists and on foreigners who come into a country temporarily to earn income therein—musicians and actors, for example—; and the proceeds of investments made by foreigners may be taxed before they are remitted abroad. The amount of revenue which a government can hope to secure from foreigners by these means is, of course, limited. If the rates of tax are raised beyond a certain point, foreigners will be so far discouraged from visiting the country and making new investments in it that less may well be obtained than would have been obtained from lower rates. Still, the government of a country in which foreigners have in the past made and now hold large investments has the power, if it chooses to exercise it, to exact large sums from them in respect of their existing holdings ; and, by providing that holdings now in the hands of foreigners shall continue to be taxed even if they are transferred to nationals, it can prevent them from escaping the burden by selling their property. In actual practice most governments tax both income accruing to their residents wherever it originates and also income originating in their territory and accruing to foreigners : and they behave in an analogous manner in respect of property passing at death. Thus they often contrive to make a substantial levy upon foreigners.

¹ For a discussion of the complicated problems connected with the residence of companies, cf. *Royal Commission on the Income Tax, Report*, section 14.

§ 4. Now it is plainly no net advantage to the inhabitants of State A to collect 50 millions towards its revenue from the inhabitants of States B, C, and D, if at the same time the inhabitants of those States collect 50 millions towards their revenue from the inhabitants of A. What is won with one hand is lost with the other; and the "representative State" would be equally well-off if all States confined their levies to residents within themselves. Nor is this all. When A taxes B's residents in respect of income arising, or property situated, in A, these persons must, unless B refrains from taxing them, be subject, in respect of the income or property, to "double taxation". This means that a resident in one country, who contemplates rendering service or making investments in another, is prevented from doing so unless the profits to be won are, not merely higher than those obtainable at home, but higher in a sufficient degree to compensate for the double taxation. A barrier is thus set up against the free movement of work and capital between countries. In so far as aggregate government expenses are really higher in respect of a man who resides in one country and earns or invests in another than in respect of one all of whose activities are confined to the same country, such a barrier corresponds to a true cost, and is *prima facie* desirable from the standpoint of world welfare. But any excess of aggregate government expense that may result from the splitting of residence and work or property is likely to be very small as compared with the additional taxation currently imposed on people who achieve this splitting. The barriers which are in fact set up by double taxation are, therefore, *not* desirable from the standpoint of world welfare, but are, on the contrary, calculated to reduce aggregate productivity and aggregate well-being. Hence, if all States were in an equally strong position for levying taxes on foreigners, it would be to the advantage of them all, both collectively and individually, to enter into an agreement not to make these levies. Since in real life some States are in a stronger position for mulcting foreigners than others, a mutual self-denying ordinance, though still in the interest of all States collectively, would not be in the interest of all

of them individually, unless some arrangement were made to compensate those to whom the agreement would be detrimental at the cost of those to whom it would bring exceptional advantages. To find a practicable solution for problems of this class is the proper work of international diplomacy. The subject has been studied by experts under the auspices of the League of Nations and a plan has been devised.¹

§ 5. Until comparatively recently "origin" was predominantly regarded as the primary title to taxation, so that, if, in order to obviate a double charge, either the right to tax residents in respect of income arising abroad or the right to tax foreigners in respect of income originating in the taxing country had to be surrendered, there would have been a wide consensus in favour of the former policy. Recent studies, however, have reversed this view. Stress is laid on the fact that countries, whose citizens or governments wish to borrow money from foreigners, have the chief interest in removing the barrier of double taxation: and it has been observed that Great Britain, France and Brazil, during the course of the war, all raised loans in foreign countries, interest on which was guaranteed free of tax, thus giving up, in respect of that interest, the right to tax income originating in their borders. The League of Nations experts, in constructing their plan, accept this point of view. They recommend that, as between countries neither of which is predominantly debtor or creditor to the other, each should agree to exempt from taxation income originating in itself but accruing to citizens of the other, and to tax only income accruing to its own residents, no matter where that income has its origin. As between one country which is predominantly a debtor and another which is predominantly a creditor this arrangement would not, however, work out equally. The debtor country would be required to surrender much more revenue than the creditor country; for there would be much more income originating in its borders and accruing elsewhere. The League of Nations experts, therefore, suggest that in these cases

¹ Cf. *League of Nations Report on Double Taxation*, by Professors Bruins, Einaudi, Seligman and Sir Josiah Stamp, 1923.

conventions should, as before, be made for the mutual exemption of income passing out to non-residents, but that, in order to prevent this bargain from affecting the contracting States unequally, appropriate compensation should be paid to the governments of those which would lose by it by the governments of those which would gain.

§ 6. The purpose of this plan is simply to remove the anti-social barrier set up by double taxation, while leaving unmodified the relation between the levies made by government A on the nationals of B, and by government B on the nationals of A. Persons interested in political ethics will, however, wish to delve deeper than this. In so far as a government only subjects foreigners, in respect of income originating in its territory or of property situated there, to rates of taxation equal to those imposed on its own nationals, it may seem at first sight that the charges made can be justified as payments for, corresponding to costs of, services rendered. Reflection, however, shows that this plea is unsound. For an Englishman resident in England and drawing a £1000 income from England is protected by the British Government in respect of his person as well as of his property; whereas a non-resident foreigner drawing a £1000 income from England is protected in respect of his property only, and ought, therefore, on this line of argument, to pay less.¹ *A fortiori* discriminating taxes against foreign visitors and investors could not be thus justified. Hence we may conclude in a general way that, if a government taxes foreigners through non-discriminating income tax and death duties, still more if it taxes them through levies that discriminate against them, it makes, as regards some part of these levies, a simple predatory exaction from them. Now, it is commonly believed that the vegetable, and, within limits, the animal kingdom, are, so to speak, a kingdom for man; so that it is proper to treat them merely as means, and not at all as ends in themselves. To some ardent

¹ To retort that the resident pays for the protection of his person through commodity taxes, which the non-resident escapes, is obviously inadequate in the case of rich men; and this, from the present point of view, is the only important case.

nationalists foreigners are in a very similar position ; their interests as such demand no consideration from us ; so far as they can be exploited without risk of danger to ourselves, they ought to be exploited. To a person holding that view our problem presents no difficulty. But persons who are educated do not hold that view. To them it seems plain that one government is not entitled to make a predatory exaction on the citizens of another country, any more than one individual is entitled to take money from another individual, unless some good reason can be given for doing this. There is only one sort of good reason available. If a foreign government can be shown to be collecting a contribution to its revenue from members of our community of, say, 10 millions more than is " justified " by any services which it renders to them, this gives warrant for our government, if it can, collecting a like unearned 10 millions from the subjects of that foreign government. No doubt, it will rarely be practicable to give an equivalent relief out of this money to those particular members of our community whom the foreign government has mulcted, and, therefore, the case for this retorted taxation is weaker than it might have been. Nevertheless, there is a case ; for it is not unreasonable to regard the British community *vis-à-vis*, say, Frenchmen, as, in a sense, a unitary body, and to seek to offset by levies on Frenchmen any levies that the French government may make upon it. Apart from this kind of compensatory retaliation, attempts to mulct the foreigner are not ethically defensible.

CHAPTER XIX

TAXES ON FOREIGN TRADE

§ 1. WHEN it is a question of one government imposing direct taxes upon foreigners who become subject to its taxing power, the ethical issue is not greatly complicated by doubts as to the true incidence of the taxes. With taxes upon commodities and services that enter into international trade the case is, however, otherwise. There are considerable differences of opinion as to where the burden of these taxes falls. Obviously, if the whole of it falls upon the citizens of the taxing country, no issue of international ethics arises. This chapter is concerned, first with general taxes upon articles entering into a country's foreign trade; secondly, with taxes on particular articles. Our main problem is to determine how far and in what circumstances the burden of taxes of this class imposed by the government of one country *can* be thrown upon the citizens of other countries. The ethical issue as to how far it *ought* to be thrown is then briefly studied.

§ 2. A preliminary difficulty arises from the fact that the term burden is ambiguous. In popular discussion this burden is generally conceived to be represented by the money raised in revenue. Thus, if a tax of 1s. per unit is levied upon a certain class of import and the price rises by 9d., foreigners are said to be burdened to the extent of the number of units imported after the tax is imposed multiplied by 3d., say, by a million pounds. But, besides any contribution to our revenue which they may be forced to make in respect of the trade that continues after our taxes have been imposed, foreigners also suffer an injury in respect of the trade that these taxes destroy. Thus they are subjected, not merely

to a payment-burden, but to a larger sacrifice-burden, in which the payment-burden is included. The relation between their payment-burden and their sacrifice-burden is determined by the elasticities of our demand for foreign goods and of the foreign demand for our goods, the two burdens approaching towards one another as either elasticity approaches towards zero. But it is not possible to lay down as a universal rule that variations in these elasticities of a sort to augment the foreign payment-burden necessarily augment the foreign sacrifice-burden also. This last point will be referred to in another connection later on. For the present, however, attention may be confined to the point of view of the taxing country, which is concerned, not with the sacrifice-burden imposed upon foreigners, but with the payment-burden; for this measures in a general way—a more precise definition will be given in § 7—the contribution which foreigners make to our revenue.

§ 3. Mill, in his analysis of foreign trade, started from the simplifying hypothesis that all England's exports may be represented by so many yards of cloth and all her imports by so many yards of linen. Marshall proceeded along the same lines, writing, in the first exposition of his theory, as follows: "*It is assumed that the pure theory of domestic values has provided the means of measuring the value in England of all the various wares exported by England in terms of any one of them. Suppose cloth of a definite quality to be one of them; then the value in England of all the wares which England exports may be expressed as that of a certain number of yards of cloth. So the value in Germany [representing the rest of the world] of all the wares which Germany exports may be expressed as that of, say, a certain number of yards of linen.*"¹ In his final statement he modifies these assumptions somewhat, writing: "Mill took a yard of cloth as representative of the products of one country and a yard of linen as representative of the products of the other. But it seems better to suppose either country to make up her exports into representative "bales", that is, bales each of

¹ *The Pure Theory of Foreign Trade* [privately printed], p. 1. The italics are mine.

which represents uniform aggregate investments of her labour (of various qualities) and of her capital.”¹ It is important to realise that this second assumption, though Marshall’s phraseology does not reveal the fact, differs from the first in a fundamental manner. When several commodities enter into international trade, the first assumption necessarily conflicts with the facts unless conditions of constant return prevail everywhere; for any modification of international trade conditions, such as will result from the imposition even of general import or export duties, is bound to alter the relative values of the different commodities produced inside each country. The second assumption escapes this logical difficulty, but only at the expense of allowing a thing called a bale to have different real contents before and after taxation. If, however, constant returns prevail everywhere, both assumptions fit the facts, and become equivalent to one another. An English yard of cloth is the same as an English bale, each being the fruit of a unit of English labour—I use labour as a short term to cover a composite “dose” of labour, capital and land—in all conditions: and a foreign yard of cloth is the same as a foreign bale, each being the fruit of a unit of foreign labour in all conditions.

§ 4. It is possible to analyse the effects of taxation upon foreign trade without making the assumption of constant returns. Account must then be taken of the fact that a contraction in the volume of a country’s foreign purchases in consequence of taxation, in so far as it alters the scale of foreign production, may augment or diminish the quantity of foreign goods that a unit of foreign labour carries; and of the parallel fact about domestic labour. Thus widely divergent effects upon the ratio of interchange between British and foreign *goods* may take place, even though the ratio of interchange between British and foreign *labour* is only slightly disturbed. Great complications necessarily result. In my judgement the fundamental issues of foreign trade taxation can be brought out if these complications are left out of account. In the text, therefore, I shall make the assumption that constant returns prevail everywhere,

¹ *Money, Credit and Commerce*, p. 157.

indicating in footnotes some of the consequences that would follow if that assumption were removed. In working out, on this basis, the effect of *general taxes* on foreign trade—particular taxes will be considered later—it will be convenient to employ the cloth-linen terminology.

§ 5. Marshall has shown that, for purposes of general analysis, the import trade and the export trade of any country may be regarded as the two mutually dependent sides of a barter transaction. Apart from new borrowings, the payment of interest on past loans, and so on, a country's foreign trade consists in the purchase of imports of goods and services from abroad by means of exports of goods and services produced at home. It follows that, provided the government spends the proceeds of a tax in the same way in either case, it makes no difference on which side of the exchange transaction the tax is imposed. Marshall once put the matter thus: "For purposes of general analysis the all-round merchant is the only one that need be considered. It is true that the exporter prefers to sell bills drawn against his produce to an importer, each specialising his knowledge on one-half of the trade. But that is only because there is such keen competition between importers that, if one importer offers such bad terms for the bill as to keep an undue share of the profit for himself, the bill will be sold to some other importer. The difference to the export merchant doing all-round business of £200,000 arising from the change from a tax of £10,000 upon his export trade to a tax of £10,000 on his import trade, the date at which the tax is levied being the same, is nothing at all. In either case the tax would put out of the trade just those exports with which foreign markets are relatively saturated and just those imports with which English markets are relatively saturated."¹ When a country's imports consist in part of goods received in payment of interest on past loans or of new investments by foreigners, or when its exports embrace similar elements, Marshall's simple statement requires some modification. If, however, we reckon receipts for interest payment and scrip issued in

¹ The citation is from a private note. The same point is made in other words in *Money, Credit and Commerce*, pp. 180-82.

return for new investments as articles entering into trade, we can extend it to cover all international trade relations. With this understanding, given Marshall's assumptions, we can lay it down generally that a tax of so much per cent upon the whole of a country's imports will have exactly the same effects as an equal percentage tax on the whole of her exports.

§ 6. While, however, it is immaterial on which side of the exchange process the tax is assessed, it is *not* immaterial on what the proceeds of foreign trade taxation is spent by the taxing government. It is easy to see that, if the tax is expended in buying foreign goods, the levy and expenditure of it are equivalent to collecting it in kind from imports (*i.e.* in linen); and that, if it is expended in buying domestic goods, the levy and expenditure are equivalent to collecting it in kind from exports (*i.e.* in cloth).

In the former event linen is withdrawn from the market for use by the taxing government, in the latter cloth; so that to shift from a system of linen levy to one of cloth levy is to lessen the aggregate demand for linen in terms of cloth. It follows that, when the proceeds of a given money levy are expended by the taxing government on imports (linen), the resultant modification in the rate of interchange between cloth and linen will be different from what it would have been had the levy been expended on exports (cloth).

On the assumption of constant returns, the difference must always be of the same character.¹ The rate of interchange must be modified more favourably to the taxing country if it spends the proceeds of given money taxes upon foreign trade on buying its own export goods than if it spends them on buying import goods. An extreme illustration of this may be found if we imagine linen makers (foreigners) to have an absolutely inelastic demand for cloth. In these circumstances, if the government of the cloth-making country collects its tax in linen (or, what comes to the same thing,

¹ If linen were produced under conditions of sharply decreasing supply price, the rate of interchange as between linen and cloth, though not as between foreign labour and British labour, might be affected more favourably to England by taxes taken out in linen than by taxes taken out in cloth, because the output of linen would then be greater and the economies of large scale production would come into play.

spends the proceeds of its tax in buying linen), the rate of interchange will be shifted in such wise that the linen makers pay exactly the whole of the tax: but, if the government collects its tax in cloth, the linen makers, besides doing this, will make a further contribution for the benefit of the cloth makers, handing to them actually more linen than before for their private use, as well as buying from them at full pre-tax rates the whole of the cloth to be paid over in taxes.¹ A point of more practical interest is that, when a country raises money from foreign trade taxes to pay reparations or interest on loans owing abroad—for which, of course, it needs foreign currency—it will not only have to hand the proceeds of the taxes to foreigners, but also it will itself make a larger (and foreigners will make a smaller) contribution towards them than it would do if it were raising an equal money revenue by the same taxes, to be spent on home products for its own use.

In view of these results it is plain that, in order to obtain an exact solution of the problem of tax incidence, as between cloth makers and linen makers, we must specify in what proportion the proceeds of the tax are to be expended on cloth and linen respectively. Until this is done the problem is not a determinate one. It is not, however, difficult to do this. The great bulk of every government's normal expenditure is, apart from foreign war debt, on services rendered by its own citizens. If, therefore, we put the cloth makers as the taxing country, it is reasonable to presume that the bulk of any foreign trade revenue that is collected

¹ There has been much confused discussion on this subject. When taxes in kind are under review, we naturally think of an import tax as taken out in import goods and of an export tax as taken out in export goods: and it is, therefore, easy to draw the false inference that import duties as such act differently from export duties as such. In fact, it is not the choice between assessing imports or assessing exports that matters, but the choice between making import goods or export goods the content of the real revenue that is raised. Even Edgeworth in his final discussion (*Economic Journal*, 1897, p. 297), in which he recants a former statement, makes a slip. He asserts that the excess gain in the second case set out in the text is not possible when the tax is levied in money. This condition is not necessary. It is enough that the proceeds of the tax, should it be levied in money, shall be expended by the taxing government in the purchase for its own service of export goods of its own country. This whole matter is set out in a few sentences by Marshall (*Money, Credit and Commerce*, p. 181).

will be expended in cloth. I shall, therefore, confine attention to the problem as presented by that sort of tax.

§ 7. A necessary preliminary is to define in a precise, if arbitrary, manner the way in which the foreigners' contribution towards a country's revenue is to be understood. Let us choose units of cloth (exports) and linen (imports) in such a way that, in the absence of taxation, one unit of cloth exchanges against one unit of linen. A tax in cloth (or in money to be expended on cloth) is imposed. The tax absorbs B units of cloth, and, in consequence of it, instead of foreigners sending to us A units of linen and carrying away A units of cloth, they send $(A - C)$ units of linen and carry away $(A - D)$ units of cloth. The quantity of cloth which is required to purchase one unit of linen thus becomes, instead of one unit of cloth, $\frac{A - D}{A - C}$ units of cloth. I define

the foreigners' contribution to our revenue as the difference between the quantity of cloth we actually send abroad, i.e. $(A - D)$ units, and the quantity which, at the pre-tax rate of interchange, we should have had to send, in order to buy the $(A - C)$ units of linen which we now import. It is thus measured by $[(A - C) - (A - D)] = (D - C)$ units of cloth.¹ This may be expressed otherwise, thus: Write t for the rate of tax in

¹ For a tax levied in linen the corresponding expression for the foreigners' contribution will be $(D' - C')$. With taxes absorbing, in the one case R units of cloth, in the other R units of linen, the argument of § 6 showed that, apart from the special case of sharply increasing returns, the improvement in the rate of interchange for the taxing country under the cloth tax, namely $\left\{1 - \frac{A - D}{A - C}\right\}$ or $\frac{D - C}{A - C}$ is necessarily greater than the improvement under the linen tax, namely $\left\{1 - \frac{A - D'}{A - C'}\right\}$ or $\frac{D' - C'}{A - C'}$. It does not follow, however, that the foreigner's proportionate contribution of revenue under the cloth tax, namely $\frac{D - C}{R}$, is necessarily greater than his proportionate contribution under the linen tax, namely $\frac{D' - C'}{R}$. As a fact, a study of suitably drawn diagrams shows that, where there is symmetry of reciprocal demands, with taxes at less than a certain rate the former of these values, with taxes at more than this rate the latter of them, will be the greater. Thus, whereas, apart from decreasing supply price, a tax collected in export goods always turns the real rate of interchange more in favour of the taxing country than one collected in import goods, such a tax only sometimes secures a larger proportion of the revenue obtained through it in the form of a contribution from the foreigner in the sense defined above.

cloth per unit of linen and Δp for the rise of price inclusive of tax; so that $(t - \Delta p)$ is the fall of price exclusive of tax (*i.e.* in bond). Then $t = \frac{R}{A - C}$ and $\Delta p = \left\{ \frac{A - D + R}{A - C} - 1 \right\} = \frac{C - D + R}{A - C}$; so that $(t - \Delta p) = \frac{D - C}{A - C}$.

$$\text{But } (A - C) = \frac{R}{t}.$$

$\therefore (D - C)$, which we have defined as the foreigners' contribution towards the revenue, $= \frac{(t - \Delta p)}{t} R$.

§ 8. With this definition it is easy to see in a general way that the magnitude of the foreigners' contribution, expressed as a proportion of the revenue raised by foreign trade taxation, is determined by the comparative elasticities of the English demand for linen in terms of cloth and of the foreign supply of linen for cloth, in the neighbourhood of the marginal transactions carried through. The more elastic is the English demand and the less elastic is the foreign supply, the larger the foreign contribution will be. If the revenue to be raised is fairly small, this broad qualitative result can be given a quantitative content within reasonable limits of error. Let the elasticity, in respect of pre-tax quantities, of the English demand be written η_h , of the foreign supply e_f . Then, if the English government imposes taxes on foreign trade yielding a revenue R , the contribution exacted from foreigners, which we have seen may be written $\frac{t - \Delta p}{t} R$, will be

approximately equal to $\frac{-\eta_h}{-\eta_h + e_f} R$. This can be proved

rigidly if the demand and supply curves are straight lines, whether the tax is imposed at so much cloth on each unit of linen sold (*i.e.* a specific tax) or at so much per cent of the aggregate cloth value of the linen sold (*i.e.* an *ad valorem* tax). For taxes sufficiently small to make it probable that, over the relevant range, the curves of demand and supply, as conceived in Marshall's ordinary domestic trade analysis, do not

diverge significantly from straight lines,¹ it is an adequate approximation.

§ 9. If we had not made the assumption of constant returns, it would be possible to conceive circumstances in which this expression is negative: *i.e.* in which the foreign country makes a negative contribution to the revenue, or, in other words, in which the taxing country, besides contributing the whole revenue itself, also exchanges its goods with foreigners on terms more favourable to them than it would have done had no taxation been imposed. With constant returns this cannot happen. Even with constant returns, however, it is possible to conceive circumstances in which the above expression has a value greater than R : *i.e.* in which, as illustrated in § 6, the foreign country not only contributes the whole of the taxing country's revenue, but also sells its goods there on cheaper real terms than it would do if there were no taxation. This would happen if the foreign supply of linen against cloth had a negative elasticity.² Marshall has studied these abnormal conditions by an ingenious and elaborate machinery; but he has made it clear—and nobody really disputes his conclusion on this point—that such conditions are not found in the general foreign trade relations of economically significant countries in the real world.³ As an exercise in pure theory the analysis of them has interest and value, but for practical purposes they may safely be ignored. In real life general foreign trade relations are always such that η_h is a substantial negative quantity and e_f a substantial positive one. Hence, a country imposing general taxes upon its import or export trade and expending the proceeds on its own goods, can never either be forced itself to make payments which are, in effect, larger than the amount of the revenue it collects, or to throw as much as—still less, more than—the whole burden of this revenue upon

¹ That is to say, when an aggregate of $\phi(x)$ units of cloth are offered for x units of linen and an aggregate of $\psi(y)$ units of linen for y units of cloth, ϕ'' and ψ'' , over the relevant range of values of x and y , do not differ significantly from zero.

² As will be shown presently, e_f as defined above will be negative provided that η_f (*i.e.* the elasticity of the foreign demand for cloth in terms of linen) lies between 0 and -1 .

³ Cf. *Money, Credit and Commerce*, p. 197.

foreigners. It will always force its own citizens to make *some* payment. But also "every import duty and every export duty imposed by a country tends to move the terms of trade in her favour, because it tends to diminish the volume of trade which she is willing to do on any given terms".¹ Thus it will also always exact *some* contribution from foreigners.

§ 10. Before the argument can be carried further it is necessary to exhibit the relation between two quantities which are liable to be confused. These are (1) the elasticity of the foreigners' supply of linen for cloth and (2) the elasticity of the foreigners' demand for cloth in terms of linen. The former of these, in respect of some given quantity of linen, may be written e_f : the latter, for symmetry with the native demand for linen in terms of cloth, may be written η_f . We then know that e_f is the quotient obtained by dividing the proportionate change in the aggregate quantity of linen supplied by the proportionate change in the quantity of cloth offered per unit of linen. The elasticity of the demand for cloth in terms of linen, η_f , is not simply this fraction with the sign reversed. It is the quotient obtained by dividing the proportionate change in the aggregate quantity of cloth demanded by the proportionate change in the quantity of linen offered per unit of cloth: which is quite a different thing. The difference, which is, of course, a consequence of the essential asymmetry in the concept of elasticity, can be made clear in symbols. Let b units of linen be offered against a units of cloth and let $(b + \Delta b)$ units of linen be offered against $(a + \Delta a)$ units of cloth. Then, on Marshall's definition, the value of η_f (*i.e.* the elasticity of the demand for cloth in terms of linen when some given quantity, say b units of linen, are being offered), is given by the equation:

$$\eta_f \left[\left\{ \frac{b + \Delta b}{a + \Delta a} - \frac{b}{a} \right\} \div \frac{b}{a} \right] = \frac{\Delta a}{a},$$

$$\therefore \eta_f = \frac{\Delta a}{a} \div \left\{ \frac{a(b + \Delta b)}{b(a + \Delta a)} - 1 \right\} = \frac{b\Delta a\{a + \Delta a\}}{a\{a\Delta b - b\Delta a\}}$$

$$= (\text{approximately}) \frac{b\Delta a}{a\Delta b - b\Delta a}.$$

¹ *Money, Credit and Commerce*, p. 190.

Analogously, the elasticity of the supply of linen in terms of cloth (when b units of linen are being transferred), which we write e_f , is given by the equation

$$e_f \left[\left\{ \frac{a + \Delta a}{b + \Delta b} - \frac{a}{b} \right\} \div \frac{a}{b} \right] = \frac{\Delta b}{b},$$

$$\therefore e_f = \frac{\Delta b}{b} \div \left\{ \frac{b(a + \Delta a)}{a(b + \Delta b)} - 1 \right\} = \frac{a\Delta b\{b + \Delta b\}}{b\{b\Delta a - a\Delta b\}}$$

$$= (\text{approximately}) - \frac{a\Delta b}{a\Delta b - b\Delta a}.$$

Thus, e_f is not equal to $-\eta_f$, but is related to it by the equation $\eta_f + e_f = -1$. By analogy, of course, if we write η_h for the English demand in cloth for foreign linen when some given quantity, say a units of cloth, are being offered, and e_h for the English supply of cloth for foreign linen, $\eta_h + e_h = -1$.

§ 11. The appended results follow immediately.

First, if the value of either η_f or e_f lies between 0 and -1 , the value of the other also must lie between these values, so that both are negative. If either has a value $-\frac{1}{2}$, the other also has this value, so that, in that case, $\eta_f = e_f$.

Secondly, if either η_f or $e_f = 0$, the other $= -1$. Thus, if the demand for cloth in terms of linen is represented by a rectangular hyperbola, the supply of linen in terms of cloth will be absolutely inelastic. A little reflection on the significance of the terms employed will show, without any mathematical technique, that this is necessarily so.

Thirdly, if η_f is negative and greater than unity, e_f must be positive. If η_f is only slightly greater than unity, say $1\frac{1}{10}$, it will be proportionately (disregarding signs) very much greater than e_f . But, as η_f becomes a large negative quantity, e_f becomes a large positive quantity, approaching numerically to η_f . Thus, if $\eta_f = -2$, $e_f = 1$, but, if $\eta_f = -10$, $e_f = 9$. More generally, as η_f increases in magnitude, it approximates numerically to e_f .

When $\eta_f = -1\frac{1}{10}$, $e_f = -\frac{1}{11}\eta_f$.

When $\eta_f = -2$, $e_f = -\frac{1}{2}\eta_f$.

When	$\eta_f = -10, e_f = -\frac{9}{10} \eta_f$
When	$\eta_f = -50, e_f = -\frac{49}{50} \eta_f$
When	$\eta_f = -\infty, e_f = -\eta_f$

The relations between η_h and e_h are, of course, similar.

§ 12. From what has just been said it follows that, when the elasticities involved are large, the error involved in treating the elasticity of the demand for linen in terms of cloth as equivalent (with sign reversed) to the elasticity of the supply of linen as against cloth is also small. In fact, as was argued in § 9, for the purposes of our present problem, it is proper to assume that the elasticities are large. Hence, if, as before, we make our elasticity symbols refer to the quantities of linen and of cloth that are actually exchanged in the absence of taxation, and if we suppose the tax rate to be small, we obtain, as an approximate measure of the foreigners' contribution,

$$\begin{aligned} & -\eta_h R. \\ & -\eta_h - \eta_f \end{aligned}$$

§ 13. We are now able to advance a stage beyond the position reached in § 8. If the world were divided into two countries of about equal economic importance, it would be reasonable, in the absence of special knowledge, to assume that their demands for each other's goods are symmetrical:¹ i.e. that, units being so chosen as, in the absence of taxation, to make the number of units of cloth sold equal to the

¹ To obviate confusion it may be well to call attention explicitly to a point which is not of practical importance when the tax rates are small, but might be important if they were large. Let our units be so chosen that, in the absence of taxation, A units of cloth exchange against A units of linen. Write $\eta_f(x_c)$ for the elasticity of the foreign demand for cloth when x units of cloth are being exchanged, and $\eta_f(x_l)$ for the elasticity of the foreign demand for cloth when x units of linen are being exchanged. In like manner write $\eta_h(x_c)$ for the elasticity of the home demand for linen when x units of cloth are being exchanged, and $\eta_h(x_l)$ for the elasticity of the home demand for linen when x units of linen are being exchanged. The reciprocal demands are then symmetrical throughout provided that, whatever the values of x_c and x_l , whenever $x_c = x_l$, $\eta_f(x_c) = \eta_h(x_l)$. When, as a result of taxation, x_c cloth is exchanging against x_l linen, and x_c and x_l are unequal, it does not, in general, follow from the above symmetry that $\eta_f(x_c) = \eta_h(x_l)$. Thus only follows in the special case where η_f and η_h are constants independent of the values of x_c and x_l .

number of units of linen bought, the elasticity of the foreign demand for cloth when any x units of linen are being sold is equal to the elasticity of the English demand for linen when any x units of cloth are being sold. The approximate equalities demonstrated in the preceding section, together with the presumption that the elasticities involved are large, enable us to infer that, in these conditions, $\eta_h = \eta_f$, so that the foreign contribution is equal approximately to $\frac{1}{2} R$. That is to say, if one of our two countries were to impose a general tax upon either its imports or its exports (in the most inclusive sense), to be expended on its own commodities, it would be able to tax the foreigner to the extent of approximately one-half the revenue it raised. In actual life, of course, no one country is nearly as large or economically important as half the world. For the United Kingdom, Mr. Flux has calculated that our exports represented about $13\frac{1}{2}$ per cent of the world's exports in 1900, 13 per cent in 1913, and 12 per cent in 1926.¹ Using this as a rough test, we may, therefore, for our present purpose, reckon the United Kingdom as equivalent to one country dealing with another country, say, seven times as important as itself. Since in this other country there is seven times as large a field to draw upon, we may expect, in the absence of special knowledge, that a given percentage rise in the real price offered for exports will cause about seven times as large an absolute addition to the quantity of these exports. But the present exports of the two countries exchange against and balance one another. Therefore, seven times as large an absolute addition to exports in the bigger country implies also seven times as large a proportionate addition. That is to say, the supply of exports is seven times as elastic in it as in the smaller country: which implies again, in the conditions here postulated, that the demand for imports is approximately seven times as elastic. Hence, if one country taxes the trade between it and another

seven times as large, the expression $\frac{-\eta_h}{-\eta_h - \eta_f} R$ becomes

¹ *Economic Journal*, December 1926, p. 553.

$\frac{1}{1+7}R = \frac{1}{8}R$. In other words, the contribution towards our revenue, which, on the evidence of "economic size" alone, without reference to the *nature* of our trade, we could reckon to obtain from the foreigner, is one-eighth part of our total receipts from general import and export duties. This is a very liberal reckoning: for it is based on an estimate of "economic size" derived from comparative *trade* statistics, and not, as some might hold would be more proper, from comparative *production* statistics—a test which would, of course, make us appear much "smaller" than the export test does.

§ 14. When special knowledge of the *nature* of a country's trade is available, the first approximation thus reached must be modified. If, as for the present purpose is reasonable, we ignore the element of rivalry between a country's demands for different imports, we can calculate the elasticity of its demand for "imports in general" from a knowledge of the quantities of and the elasticities of its demand for each several kind of import. Let us conceive this country's several imports as such and such quantities of linen entering through different doors, the demands of the people behind the several doors being independent of one another. Alternatively we may go behind linen to the foreign labour which makes it. If in equilibrium a_1, a_2, a_3 and so on represent the quantities of foreign labour employed in making butter, bicycles, and so on for the English market, and η_1, η_2, η_3 and so on represent the elasticities of the English demand for foreign labour in these several employments, it is apparent that the elasticity of the English demand for foreign labour in general, which we may write as before η_h ,

$$= \frac{\eta_1 a_1 + \eta_2 a_2 + \eta_3 a_3 \dots}{a_1 + a_2 + a_3 \dots}.$$

It follows that, when the sum of $(a_1 + a_2 + a_3 \dots)$ is given, η_h is larger, the larger is each of η_1, η_2, η_3 , and so on; and also the greater is the extent to which large a 's are associated with large η 's, that is to say, the more largely our imports

consist of things of such a sort that our demand for the labour employed in making them is elastic. An analogous proposition, of course, holds good of the elasticity, η_f , of the foreign demand for English labour. The values of the several η 's are, it will be understood, dependent, not merely on the nature of the demands for the several commodities, but also on the relation between their quantities and their labour costs. On the hypothesis of constant returns, however, which we are here adopting, quantity of output everywhere varies directly with quantity of labour employed, so that the η 's may be taken to refer indifferently to quantities of labour or to the linen or cloth value of quantities of commodity produced by it.¹ This being understood—and the relation demonstrated above between η_f and e_f being held in mind,—the foregoing formula enables us to draw inferences as to the comparative elasticities of demand and supply in particular instances of international trade from the nature of the goods which are traded. Thus Marshall has pointed out that three-quarters of a century ago England was practically the only place where foreigners could purchase manufactures made by steam machinery, not then in general use elsewhere, and tropical products which England had special facilities for obtaining.² A large part of our exports consisted of these things, for which the foreign demand was highly inelastic. Hence the foreign demand for English labour in general was inelastic: while no corresponding influences were at work to make the English demand for foreign labour in general inelastic. At that time, therefore, we were in a stronger position to "tax the foreigner" by duties on international trade than a mere quantitative reckoning of our "economic size" as compared with the rest of the world would suggest. At the present time, on the other hand, many other countries besides ourselves produce steam-manufactured goods, so that foreigners are no longer compelled to come to us:

¹ When the production of any commodity obeys the law of increasing supply price, the elasticity of the derived demand for labour—assuming this to be the sole factor of production—would, of course, be greater than that of the demand for the commodity: and conversely with commodities obeying the law of decreasing supply price.

² Cf. *Money, Credit and Commerce*, p. 192.

whereas our own imports from abroad consist in the main of food and raw materials for our industries—classes of goods for which demand is apt to be highly inelastic, particularly in a country of large population whose resources are devoted in only a small proportion (some 8 per cent) to agriculture. Hence our demand for foreign labour in general is now relatively inelastic and the foreign demand for English labour in general relatively elastic. Our position for taxing the foreigner is, therefore, much weaker than it used to be. It is extremely improbable that we could exact from him a contribution nearly as large as one-eighth part of the total yield of general import and export duties. A country which is under obligation to pay annually abroad large sums, whether for reparations or as interest on foreign debt, is, in like manner, in a weak position; for, up to the limit of these obligations, her demand for foreign goods (in this case receipts for her payments) is absolutely inelastic.¹ It is important to realise that the elasticity of a country's demand for foreign labour in general is rendered smaller by her having an inelastic demand for any substantial classes of foreign goods, even though she has also a highly elastic demand for other foreign goods. Careless thinking might suggest that this is not so. But a consideration of the formula for η_h given in the preceding section will make the truth apparent. For example, if our foreign requirements consist to the extent of one half of foreign goods or currency for making reparation payments, in respect of which the

¹ It should be noted, as a corollary to what has been said in the text, that, if the rest of the world were to combine together to place special taxes on all imports from, or exports to, a particular country, and this country constituted one-eighth part of the world, they could exact a contribution from her citizens equal, on the basis of my first approximation, to seven-eighths of the revenue raised. If that country was under obligation to pay heavy reparations or interest on past debt, or had urgent need of raw materials and food obtainable only by importation, they would be in a still stronger position against her. They could, in fact, compel her, up to the limit of her exporting capacity, to pay, besides her reparations or debt interest, the whole of whatever taxation they might choose to impose upon trade between her and themselves. On the other hand, if a single country were entitled to receive from abroad tribute or interest adequate to provide for all the imports of which she had urgent need, even the whole world acting in concert could not force her to pay any large part of taxes imposed upon imports from, or exports to, her.

elasticity of our demand (η_1) is nil, and to the extent of the other half of goods for which the elasticity of our demand is η_2 , we know from the formula that

$$\eta_h = \frac{a_1\eta_1 + a_2\eta}{a_1 + a_2} = \frac{1}{2}\eta_2.$$

§ 15. The above discussion provides a convenient bridge between general taxes on imports or exports and taxes confined to particular imports or exports. Envisaging Great Britain as the taxing country, I shall consider in turn taxes on particular imports and taxes on particular exports. To clear away complications which obscure the main issue, I shall still assume that conditions of constant return prevail everywhere, so that the elasticity of the demand for any commodity and of the demand for the labour engaged in making that commodity are everywhere equal. If this assumption were not made, the detail of the argument would be much more difficult, but the broad outline would be unchanged.

§ 16. In Chapter IX. § 8 reference was made to the fact that in certain circumstances the imposition of an import duty may enable a country to levy tribute on the foreign producers of the particular import subjected to tax. It is specially likely to have this effect if these producers are organised for the supply of that country's market, and cannot rapidly either find another outlet for their product or contract their scale of output except at heavy sacrifice. Tributes of this type are essentially transitory. When a particular group of foreign producers is hit through them, capital and labour will flow into the injured industry at a less rapid rate than before, until equilibrium is re-established and the return yielded by similar foreign industries is again similar. The only way, therefore, in which import duties on particular commodities can exact a long-period continuing contribution from foreigners is by compelling the *generality* of foreigners—not merely those engaged in making the taxed goods—to offer more of their labour than before in exchange for a given quantity of ours; in other words, by altering in our favour the ratio of interchange between foreign labour in general and British labour in general. I am

concerned here exclusively with this type of contribution ; what follows has nothing to do with the transitory type. With this understanding the appropriate analysis is easily developed. Let A, B, C , be the quantities of foreign labour that, in the absence of taxation, would be brought into England in the form of different commodities—if we will, through different doors—and let ${}^a\eta_h, {}^b\eta_h, {}^c\eta_h \dots$ be the elasticities of the English demand for it in these several forms. Let our units be so chosen that the numbers of units of English labour and of foreign labour respectively which exchange against one another in the absence of any taxation are equal. Let η_f be the elasticity of the foreign demand for English labour. Then, on the lines of the analysis worked out in § 8 and § 12 it is easy to see that, if a revenue R (to be spent on English goods) is raised by a tax confined to the particular import of which A units are being imported, the foreign contribution will be equal approximately to

$$-{}^a\eta_h(A + B + C \dots) - {}^a\eta_h A - {}^b\eta_h B - {}^c\eta_h C - \dots - \eta_f(A + B + C) R.^1$$

Thus, if the English demand for the particular import is more elastic than the English demand for imports in general, foreigners will contribute a larger proportion of the revenue raised by a (small) tax on the particular import than they would do of that raised by a (small) tax on imports in general : and, if the English demand for the particular import is less elastic than the English demand for imports in general, they will contribute a smaller proportion. In the limiting case of a perfectly elastic demand they will contribute the whole of the revenue : in the opposite limiting case of a perfectly inelastic demand they would contribute nothing. So long as the demand for the taxed commodity is not *extremely* inelastic, the fact, established in §§ 13-14, that η_f is large relatively to η_h makes it improbable that the foreign contribution will be other than small.

¹ For, if T be the rate of tax on A , the fall in price, apart from the tax, of every unit of foreign labour in terms of English labour,

$$= \frac{-{}^a\eta_h A}{-{}^a\eta_h A - {}^b\eta_h B - {}^c\eta_h C - \dots - \eta_f(A + B + C \dots)} T$$

and $R \approx TA$.

§ 17. To analyse the effect of a tax on particular exports we proceed in a similar manner. Let P, Q, S, be quantities of English labour that, in the absence of taxation, would be exported from England in the form of different commodities, and let ${}^p\eta_f$, ${}^q\eta_f$, ${}^s\eta_f$, be the elasticities of the foreign demand for it in these several forms. If we suppose the tax to be collected in (or its proceeds spent upon) foreign labour, it is obvious that the expression for the English contribution to the revenue raised will be identical in form with the expression for the *foreign* contribution given in the preceding section. Therefore, since the foreign contribution *plus* the English contribution constitutes the whole revenue, the foreign contribution, when a tax is imposed on a particular British export P, will be equal approximately to

$$\left\{ 1 - \frac{{}^p\eta_f(P + Q + S + \dots)}{{}^p\eta_f P + {}^q\eta_f Q + {}^s\eta_f S + \dots + \eta_h(P + Q + S + \dots)} \right\} R.$$

Thus, if the foreign demand for the particular English export is less elastic than the foreign demand for English exports in general, the foreign contribution will be greater in proportion, and in converse conditions it will be less in proportion, under a small tax confined to the particular English export than under one assessed upon English exports in general. In the limiting case of a perfectly inelastic demand foreigners will contribute the whole revenue: in the opposite limiting case of a perfectly elastic demand they will contribute nothing. The construction of the formula implies, as I have said, that the proceeds of the tax are expended in this case upon foreign goods. But, for small taxes, this makes little difference; and the same results would hold true approximately if the proceeds were expended upon English goods.

§ 18. The results of this long inquiry, as applied to Great Britain, may now be summarised. The formulae that have been reached are, it must be clearly understood, only rough approximations, and can only be used with confidence when the rates of tax measured *ad valorem* are small. None the less, the following propositions may be laid down. First, in present conditions this country has not the power to secure from foreigners more than a very small proportion of any

revenue it might seek to raise by general taxes upon imports or exports. Secondly, by taxing particular imports for which the demand is abnormally elastic, we might exact a more substantial *proportionate* contribution from foreigners. But, since taxes on imports of highly elastic demand must involve a very large cut in the quantities of them which are purchased, and since, as we have seen, the demand for most of our imports is somewhat inelastic, we are not in a position to exact any substantial absolute contribution by these taxes. Thirdly, by taxing particular exports, *e.g.* Welsh steam coal, for which, owing to the lack of substitutes abroad, the foreign demand is highly inelastic, we might exact a substantial proportionate contribution. But the number of commodities which foreigners can obtain only in England and for which their demand is, therefore, inelastic (from the point of view of a long period) is very small. Here also, therefore, there is no opportunity for securing a substantial absolute contribution to our revenue at the expense of foreigners. These conclusions depend on the facts of our present situation, and do not hold good of all possible situations. The United States of America, for example, is in a decidedly stronger position than this country if it wishes to "tax the foreigner".

§ 19. Where the contribution which can be exacted from foreigners by import or export duties, whether in general or on particular commodities, is negligible in amount relatively to the revenue raised, no attention need be paid to it in an inquiry into the merits or otherwise of these taxes. Where, however, the contribution is substantial, its existence constitutes, from a purely national point of view, an argument in favour of the taxes that yield it. *Other things being equal*, as between two ways of raising a given revenue, one of which yields a larger and the other a smaller contribution from outsiders, the former is clearly to be preferred. The phrase *other things being equal* is, however, important here. What, from a purely national point of view, interests us is the sacrifice our citizens suffer in consequence of our government's raising a given revenue; and this sacrifice will not necessarily be less under a tax which exacts

a larger contribution from foreigners than under one which exacts from them a smaller or a nil contribution, but possesses other advantages. Distributional considerations are relevant here in a manner which is obvious and need not be enlarged upon. Apart from them, the essence of the matter may be set out thus. If the only factor determining the size of the foreigner's contribution to our revenue was the character of the foreign demand for our goods, then a larger foreign contribution would always imply a smaller sacrifice burden on the part of our own people: for, the less elastic is the foreign demand, the lower is the rate of tax necessary to yield a given revenue, the smaller the rise in prices here, the less the check to consumption, and, therefore, the smaller not only our payment burden but also our loss through destroyed consumption. But the foreign contribution may be large in consequence, not of high urgency or inelasticity in the foreign demand for our goods, but of low urgency or inelasticity in our demand for foreign goods. Where this is so, a higher rate of tax is needed to yield a given revenue than would be needed if our demand were less elastic, and the foreigner's contribution, therefore, smaller. Consequently, more consumption is destroyed, and the ratio of our sacrifice burden to our payment burden is increased. Hence, in some circumstances the absolute amount of our sacrifice burden will be larger, in spite of the fact that the absolute amount of our payment burden is smaller, when the foreign contribution is large than when it is small. This is more likely to happen if the foreign demand for our goods is highly elastic, so that the foreigner's contribution to our revenue is in any event very small.

§ 20. The ethical issue still remains. Granted that it is possible for the government of one country to benefit its citizens by "taxing the foreigner" through import and export duties, ought it to make use of this power? This issue is evidently of the same general character as that discussed in Chapter XVIII. § 6. It cannot be settled for ourselves alone without reference to the conduct of others. *Pro tanto* what we ought to do depends on what foreigners do: if they make our people contribute towards their revenue, we are justified,

other things equal, in making their people contribute towards ours. To this extent those popular controversialists are in the right who maintain that the case for free imports for England is not so strong in the actual world as it would be in a world where all other countries also leave imports free. But, plainly, a tariff policy deliberately aimed at making petty gains at the cost of foreigners—which they can always, if they choose, counter by reprisals—would be at once impolitic and unworthy. Except as a means of tariff war, into which aggressive action on the part of others may have forced us, import and export duties should never, I suggest, be used with the intention of taxing foreigners. If such taxes are held to be desirable on other grounds, the fact that they will, as an unintended incident, tax foreigners to a small extent, is not, of course, a sufficient argument against imposing them. But, as a broad matter of principle, we may lay down: first, that it is not practicable for a country situated as England is to tax foreigners by import or export duties to any appreciable extent: secondly, that, if it were practicable, it would not be desirable to do this.

CHAPTER XX

PROTECTIVE DUTIES

§ 1. THE subject of protective duties is an awkward one to handle on account of the twofold character of the effects to which these duties lead. On the one hand, they are instruments for raising revenue; on the other, instruments for excluding foreign products which compete with home-made goods. A single clear-cut issue is presented when it is proposed to institute duties so high that they would exclude the taxed product altogether and become, in effect, prohibitions against imports, thus yielding no revenue; and also when a choice has to be made between a high rate and a low rate of duty, both calculated to yield the same revenue, but the one cutting down importation much more largely than the other. In general, however, the issue is not clear cut, and it becomes necessary to weigh up and, perhaps, balance against one another the merits of so-called protective duties as revenue yielders and their merits (or demerits) as barriers against foreign competition.

§ 2. From the analysis of the preceding chapter it is easy to see that, other things being equal, an import tax on an import which competes with a home product is likely to exact a somewhat larger proportionate contribution from foreigners than an import tax on one which, like tea or coffee, does not so compete. The reason is that the presence of a rival home product tends to make the demand for the foreign product relatively elastic. From this point of view, therefore, protective import duties are likely to be better revenue raisers—I am taking a national standpoint here—than import duties on non-competing goods; though, as was

indicated in the preceding chapter, in view of the high elasticity of the foreign demand for British goods in general, the proportionate contribution of foreigners to our revenue will in any event be small. On the other hand, it was shown in Chapter IX. § 8 that, apart from the possibility of exacting a contribution from foreigners, import duties alone are likely, in general, to be worse revenue raisers than import duties *plus* equivalent excise duties, and even than excise duties alone. It is fair, I think, to set off these conflicting considerations against one another, and to conclude that, so far as revenue raising goes, it does not, as a rule, greatly matter whether we employ import duties on non-competing goods, or import duties on competing goods accompanied by an equivalent excise, or protective duties proper, *i.e.* import duties on competing goods not accompanied by an equivalent excise. If this be granted, our problem becomes much simplified. We may ignore revenue aspects altogether and assess proposals to impose protective duties by reference simply to their effects in excluding competitive imports.

§ 3. Classical theory premises that wage-rates tend to adjust themselves to demand and supply conditions in such wise that no involuntary unemployment, other than such as is due to industrial fluctuations, can exist. If this be so, the entry of competitive imports cannot be responsible for bringing about unemployment in any country in the general way that popular writers commonly suppose; and a reduction in the average volume of these imports could not lead to any significant increase of employment there. Such reduction would merely cause native labour and capital, which would otherwise have made export goods, to make instead goods for home consumption in place of the excluded imports. Whether or not, therefore, exclusion is desirable in any particular case depends wholly on whether or not the new use of native labour and capital is more advantageous than the old. There is no possibility of calling to the aid of production capital and labour which would otherwise have been unemployed. Until recent times there can be little doubt, at all events so far as this country is concerned, that this premise of the classical theory was realised in fact. Since

the war, however, there is reason to believe that wage-earners have succeeded in *maintaining* average rates of real wages higher than are, in existing conditions, compatible with full employment; and that while, of course, a substantial part of the unemployment which has prevailed is associated with transitory maladjustments, another substantial part has been due to this cause. The principal considerations on which this view rests are two in number. First, for seven years there has been a large excess in the percentage of unemployment as compared with the maximum rates occurring in times of depression before the war. Secondly, there is evidence that average rates of real wages, probably per week and certainly per hour, are now (1926-27) substantially higher than before the war;—in spite of the fact that home-produced real income per head has certainly not increased, while aggregate real income per head has diminished.¹ These considerations taken together strongly suggest that rates of real wages are, in fact, too high to allow of normal employment. It is true that the industries in which unemployment is now most marked are those into which abnormal numbers of workers were drawn during the war, and that in them at the present time (1929) wage-rates are much below the average. It is true too that, until the surplus workers have been shifted out of these industries, a lowering of wage-rates in other industries could not do much to reduce the volume of unemployment. Thus, while wage-rates on the average are higher than is compatible with a new equilibrium position permitting—apart from fluctuations—of full employment, their restrictive effect is hypothetical rather than actual; the actual primary cause of the main part of the present abnormal unemployment being the fact that workers have not as yet moved in sufficient numbers out of the war-inflated industries. For my present purpose, however, it is not necessary to go far into this matter. It is enough that, with the help of the reserve powers conferred on them by modern systems of insurance against unemployment, it is *possible* for wage-earners to maintain wage-rates, which, in the above

¹ Cf. Stamp and Bowley, *The National Income in 1924*, p. 56.

sense, are uneconomically high. The mere possibility makes it necessary for us to examine the effects of import restriction from a more general standpoint than has hitherto been common, distinguishing (1) cases in which the classical premise is satisfied and (2) cases in which it is not satisfied.

§ 4. When the classical premise is satisfied, the conditions in which it may be, and those in which it cannot be, to the national advantage to restrict the importation of particular competitive commodities are easily disentangled. Under this premise to restrict competitive imports means to prevent people from obtaining certain goods by the process of national production *plus* international exchange, and to force them to obtain them—or others—by that of national production alone. Presumably, however, if people prefer the roundabout process, they expect, by resort to it, to obtain more of the goods they want for a given expenditure of productive power. No doubt, they may make mistakes or find themselves defrauded. But, in general, what a person chooses as his immediate material interest is more likely really to be so than anything that a distant official manipulating tariffs can hope to press upon him. There is thus a strong *prima facie* presumption against government interference with the natural flow of competitive imports. This presumption is not, however, decisive. The reasoning behind it does, indeed, warrant the inference that the direct and immediate effects of leaving those imports unrestricted are beneficial to the importing community. But, as List urged long ago, direct and immediate effects are not the sole effects. “The power of producing wealth”, he wrote, “is infinitely more important than wealth itself.”¹ Consequently: “The nation must sacrifice and give up a measure of material prosperity in order to gain culture, skill and powers of united production; it must sacrifice some present advantage in order to insure to itself future ones. . . . It is true that protective duties at first increase the price of manufactured goods; but it is just as true, and, moreover, acknowledged by the prevailing economical school, that in the course of time, by the nation being enabled to build up

¹ *A National System of Political Economy*, p. 133.

a completely developed manufacturing power of its own, those goods are produced more cheaply at home than the price at which they can be imported from foreign parts.”¹ When List wrote, England had established herself as the dominant manufacturing Power. He did not deny that, for the moment, continental nations would obtain the largest return to their capital and labour by confining themselves to agriculture and buying manufactured goods from her. But he perceived that the commodities which a country can now produce most easily are not necessarily identical with those which it has the greatest natural advantages for producing. For natural advantages require for their development time and exercise. The building up of manufacturing power, involving, as it does, the training of workmen, the perfecting of machinery, of transport, of credit and of market organisation, may take years to accomplish.² Till it is completed, the old-established manufacturing State has “a thousand advantages over the newly born or half-grown manufactories of other nations”.³ This line of reasoning is particularly strong as regards an agricultural country wishful to develop manufactures. In such a country, since, *ex hypothesi*, it has no important class of artisans or factory workers, the skill required for starting any particular kind of mill will be very difficult to get. “Masters, foremen and workmen must first be either trained up at home or procured from abroad, and the profitableness of the business has not been sufficiently tested to give capitalists confidence in its success.”⁴ For a long time, therefore, it is improbable that any works which may be started will be able to compete on equal terms with established foreign rivals—and that in spite of the fact that the industry in question may be one for which the country has great natural advantages. In a country which is already largely industrial List’s argument has less force. The initial difficulty involved in starting a new industry is likely to be much slighter, because it is comparatively easy to obtain from among a people already accustomed to many varieties of factory work hands capable of carrying on a new variety

¹ Cf. *A National System of Political Economy*, pp. 144-45.

² *Ibid.* p. 300.

³ *Ibid.* p. 300.

⁴ *Ibid.* p. 294.

of it. Further, in an industrial community, those other important elements of productive power, organised systems of transport and of credit, which, in an agricultural country, may need themselves to be built up before manufactures can be profitably established, will be already in existence. Still the argument for protecting particular infant industries in a developed industrial community, no less than that for protecting infant industrial communities, is formally quite valid. The same thing is true of the analogous argument for defending particular established industries, for which a country is well suited, against deliberate attack. It is conceivable that foreign combinations might adopt a policy of killing British rivals in order to establish an exclusive control over our markets. They might sell in England at low prices—prices so low as to involve a positive loss—until their rivals were destroyed, and then, no longer having any competitors to fear, might gather in the fruit of their labours by raising prices to a very high level. In the face of action of that kind, to check the import of their cheap goods, though still involving a direct loss, might, nevertheless, be sound policy, as tending to save us from monopolistic exactions afterwards. Of course, it would not necessarily be sound policy even in that case; for, very often, the threatened firms would be rich and strong enough to defend themselves without direct or indirect government aid. Thus List, after he has argued that, in consequence of foreign aggression, “in a short time a complex combination of productive powers and of property becomes lost, which has been created only by the exertions and endeavours of several generations”, points out on the same page that, “when the government is unable to provide any remedy for its (i.e. an export trade’s) interruption, we often see manufacturers continuing to produce at an actual loss. They want to avert, in expectation of better times, the irrecoverable injury which they would suffer from a stoppage of their works.”¹ Still, the formal validity of the above extension of List’s argument is not in doubt.²

¹ *A National System of Political Economy*, p. 298.

² Cf. *ante*, Chapter VIII. § 3.

§ 5. When the classical premise is not realised, but uneconomically high rates of wage have been established, it is possible—on the assumption that these uneconomically high rates will in any event be maintained—for a restriction of competitive imports to benefit a country in another and quite different way. To elucidate this matter it is convenient to imagine an artificially simplified case. Let the people of the country be composed of two groups, equipped respectively to make food and to make motor-cars. The motor-car-makers insist on a “living wage” at a level which, in existing conditions, involves a number of potential motor-makers being unemployed, and the food-makers on a wage which, while giving full employment to all present food-makers, will not allow of any motor-makers migrating to their industry. To focus the ideas, suppose that one half only of the people attached to the motor-makers’ industry are in work; the other half being sustained with food, in return for no services rendered, by the rest of the population. The food-makers meanwhile obtain half the motor-cars they want, say 100,000 a year, by exchanging food with domestic motor-makers, and the remaining half by exchanging it with foreigners. Suppose that in these conditions the government decides to forbid the importation of foreign motor-cars. The food price of motor-cars will go up, and the food-makers, therefore, are not likely to want as many of them as before. In order, however, to get the clearest possible case, let us imagine that the demand is absolutely inelastic, and that they *must* have 200,000 a year whatever the price. They will then buy the whole 200,000 from the domestic motor-makers, all of whom will be now employed at their high living wage. They will obviously be much better off than before. The food-makers will be worse off than before, in that they have to pay a higher food price for their motor-cars; but they will be better off, in that they no longer need to contribute towards the support of unemployed motor-makers. Conditions can easily be conceived in which the extra cost of their cars is less than the saving they make in this way; so that they and the motor-makers are *both* better off than they would have been had the importation of foreign motors been

permitted. Even if the conditions are less favourable, and the food-makers are worse off than before, it may still happen that their loss (measured in terms of satisfaction) is less than the motor-makers' gain; so that the community as a whole, —the food-makers and motor-makers together—are advantaged by the policy of import restriction. It is thus clear that, in certain conditions, assuming that wages are set at an uneconomically high level, the exclusion of foreign motor-cars will alleviate unemployment and not inflict any counterbalancing hurt. This policy is, however, strictly limited in scope. It goes without saying that it cannot be used to reduce unemployment in industries that make goods for export, nor yet in those which, while manufacturing for the home market, are not subject to foreign competition. Moreover, even in home industries which are subject to such competition it would often do more harm than good. Thus, against the extreme case of a perfectly inelastic demand for motor-cars on the part of food-makers, we may set the opposite extreme case of a perfectly elastic demand. In this case to stop imports of motor-cars would add nothing to employment in the motor-making industries, while it would damage the food-makers both by preventing them from getting half the cars they want and by destroying without compensation a market for their output, thus creating unemployment among them. It appears, therefore, that, even when the classical premise is not realised, a good case for restricting competitive imports, as a means of alleviating unemployment, can only be made out in respect of commodities for which the home demand is considerably urgent or inelastic.

§ 6. What has just been said applies to a permanent restriction of particular competitive imports. An easy extension of the reasoning shows that, in certain conditions, a temporary restriction confined to periods of depression may also be advantageous. It is especially likely to be so when, apart from restriction, particular native industries are threatened with disorganisation by the dumping into their market at abnormally low prices of the surplus produce of foreign manufacturers, anxious at the same time not to spoil

their home market and not to reduce more than can be avoided the scale of their output. The immediate advantage, which such dumping would confer on the purchasers of the dumped imports, might well be more than offset by the evils of disorganisation and the temporary addition to unemployment in the native industries whose market was cut away. Restriction of imports, if it was carried out with adequate skill and discrimination, might, therefore, yield a net benefit to the country as a whole. Since the end of the war a number of governments have endeavoured, with greater or less success, to strike at imports which are dumped in the above sense, as also at those which have enjoyed temporary export bounties in consequence of a fall in the external, as compared with the internal, values of foreign currencies.

§ 7. Up to this point nothing has been said about the effects which restrictions upon particular competitive imports may have upon distribution. The most obvious of these effects is produced as between the buyers of the commodity, imports of which are cut down, and the domestic producers of that commodity. In general these persons will find themselves able to charge higher prices, and so will, *prima facie*, make a gain at the expense of their customers. For most ordinary commodities this gain is transitory in its nature. The fact that the producers of a particular commodity are making an exceptional profit causes other people to come into their industry and to go on coming till the rate of returns is brought down again to the common level ; whatever addition to price remains being a consequence of greater real costs of production per unit, and not carrying with it any addition to average producers' gains. As a rule, the comparative earning power of the several factors of production regarded as wholes will not be appreciably altered. If, however, the competitive imports consist of a large class of goods in the making of which some one factor of production plays a predominant part, things may work out otherwise. Thus, suppose that, in an industrial country, heavy duties are imposed upon the generality of agricultural imports. As a result, farming will become more profitable, farmers will be ready to pay higher rents, and, in the end, the consuming public will be

mulcted in a lasting manner for the benefit of owners of agricultural land. In a country of peasant proprietors—provided that the products concerned are of a kind that can conveniently be grown on small farms—it may be that the beneficiaries of this distributional change are not appreciably better off than those who are injured by it. But in a country where land is owned in large blocks the beneficiaries are much better off; and, though, no doubt, it is theoretically possible to cancel the distributional change by imposing special taxes on land ownership and paying bounties to consumers of agricultural produce out of the proceeds, no such plan has ever yet been tried in practice. It is a fair presumption, I think, that, in a country such as England, any large-scale restriction of competitive agricultural imports would involve an uncanceled, or imperfectly canceled, shift of distribution from the general body of relatively poor consumers to a small number of relatively rich proprietors of agricultural land. *Per contra*, if imports, in the manufacture of which labour, as contrasted with capital and land, plays an exceptionally large part, were selected for restriction, and, in consequence, commodities of that class came to be more largely manufactured here, labour might obtain a larger proportionate share of the nation's real income, and, in specially favourable conditions, even a larger absolute share. If this were to happen, it would imply a shift in distribution favourable to relatively poor persons, and so would be, *pro tanto*, socially advantageous. This possibility is of some academic interest, though there is, I think, little chance that it could be exploited effectively in practice.

§ 8. From the foregoing discussion it is apparent that, even when the classical premise concerning wage-rates fits the facts, still more when it does not fit the facts, conditions may easily arise in which a country would benefit by restricting the importation of particular competitive goods. There is thus from a national point of view, and in a less degree from a cosmopolitan point of view also, a clear theoretical case for certain applications of protectionist policy. It does not follow, however, that governments can with advantage

attempt to make use of these theoretical openings. First, it has to be considered whether the desired results could be obtained more satisfactorily in some other way—for example by means of bounties. Secondly, it has to be considered whether governments, as constituted in real life, can be trusted, or can trust themselves, with these difficult matters. Upon this aspect of the problem Sidgwick long ago wrote with great weight as follows: "I agree, as a conclusion of abstract economic theory, that protection in certain cases and within certain limits, would probably be advantageous to the protecting country—and even, perhaps, to the world—if only it could be strictly confined to these cases and kept within these limits: but I am, nevertheless, strongly of opinion that it is practically best for a government to adhere to the broad rule of 'taxation for revenue only'—at any rate in a free community where habits of commercial enterprise are fully developed. My ground for this opinion is that I do not think we can reasonably expect our actual governments to be wise and strong enough to keep their protective interference within due limits; owing to the great difficulty and delicacy of the task of constructing a system of import duties with the double aim of raising revenue equitably and protecting native industry usefully, and the pressure that is certain to be put upon the government to extend its application of the principle of protection if it is once introduced. I think, therefore, that the gain protection might bring in particular cases is always likely to be more than counterbalanced by the general bad effects of encouraging producers and traders to look to government for aid in industrial crises and dangers, instead of relying on their own foresight, ingenuity and energy; especially since the wisest protection in any one country would tend in various ways to encourage unwise protection elsewhere."¹ It does not fall within the scope of this volume to enter further into this debate.

¹ *Principles of Political Economy*, p. 487.

PART III
FINANCE BY BORROWING

CHAPTER I

THE PLACE OF LOANS IN PUBLIC FINANCE

§ 1. IN normal times the main part of a government's revenue is required to meet regular expenditure that recurs year after year. There can be no question that in a well-ordered State all such expenditure will be provided for out of taxation, and not by borrowing. To meet it by borrowing, whether from foreign or domestic lenders, would involve an ever-growing government debt and a corresponding ever-growing obligation of interest. In the end more would have to be spent in providing the interest every year than would have been required if the government had paid its way out of taxes from the beginning. The national credit would suffer heavy damage; and ultimately the annual obligations of the government might come to exceed the maximum sum that it had the power to raise in tax revenue, even for the purpose of transfer expenditure.¹ This thesis is universally accepted. Nobody would suggest that government expenditure of a regular nature, such as expenditure on the army, navy and civil service, should normally be met otherwise than out of taxation. This does not mean, indeed, that this class of expenditure should never, in any circumstances whatever, be financed out of loans. Other things being equal, it is plainly desirable, since changes in taxation always involve disturbance, to keep the rates of

¹ Under the English system, in which interest on government debt is counted as income assessable to tax, it would never, of course, be possible for interest on internal debt actually to exceed the national income so conceived, though it might approach asymptotically towards it. But the interest might easily come to exceed the maximum sum that it was practicable for any government to raise by taxation.

taxation as nearly as possible constant from year to year. If then expenditures vary within narrow limits, it may be desirable, when practicable, to arrange a budget so that good and bad years make up for one another, a deficit in one balancing a surplus in another. It may also be desirable, where a part of the expenditure consists in a sinking fund for debt, to use this as a buffer to keep annual taxation constant. By these devices the rates of taxation may be kept steady where the income of the people is steady, in the face of moderate fluctuations in the current expenses of government. The same line of thought suggests that, where the income of a country fluctuates, it may similarly be legitimate to meet fixed annual expenditure by a succession of budgets with surpluses and deficits that cancel. For, with different incomes, to maintain the same budget revenue would necessitate tax rates varying inversely with prosperity. From this point of view we should hesitate to condemn a country, which, like Austria recently, had been subject to a sudden disaster, for meeting ordinary expenditure, even for several years on end, out of loans, while attempting to set its house in order. But, subject to the adjustment of year-to-year fluctuations, there is agreement among competent persons that current expenditure should be met out of current taxes. Even year-to-year adjustments may be opposed on the ground that, if once that policy is admitted, governments will in practice incur deficits and raid sinking funds in bad times, but will neglect to budget for compensating surpluses in good times.

rem. § 2. Next, consider government expenditure devoted to producing capital equipment—a national electricity plant, municipal gas works or tramways and so on—the fruits of which will subsequently be sold to purchasers for fees. Here it is generally agreed that the required funds ought to be raised by loans. If this is done, violent and sudden changes in tax rates are avoided: the people who benefit from the service which the new capital equipment renders pay for it in proportion to their use; and, provided, of course, that the fees charged are sufficient to wipe out the principal of the loan during the lifetime of the capital equipment, no additional taxation has ever to be raised on account of it.

Upon this matter, as upon that of the proper method of finance for normal recurrent expenditure, there is no room for controversy.

§ 3. Let us turn then to expenditures of a sort that have to be met only on special occasions but are not "remunerative", in the sense that they yield fruits to be sold for fees. Here purely fiscal considerations suggest that such expenditures, if financed by loans, ought, in general, to be financed in such a way that the loans are paid off out of taxes before the need for further similar expenditures is likely to recur. For, if this is not done, there must result an ever-growing debt and, eventually, the need for ever-growing taxes to provide interest upon it, much as would happen if ordinary recurrent expenditures were financed out of loans. This consideration must not, indeed, be stressed unduly; for in a country, in which the *money* income is rising steadily and continuously, the rates of taxation—and it is these rather than the aggregate amount of taxation that matter—required for the service of a given money debt may fall, without resort to any process of repayment, more rapidly than they will do in a country with a large sinking fund but stationary money income. (But to allow governments anxious for popularity to base their financial arrangements upon speculations of this kind is not a little dangerous. Further, at the time a loan is raised evidence should be given of ability and intention to provide adequately for the service of it by imposing new taxation sufficient to cover interest and a reasonable sinking fund.¹ Failing this, confidence in

¹ The view that loans of the kind we have been considering should be paid off in a not over-long period is often given concrete form in the establishment of a sinking fund. This is not, of course, a necessary condition of repayment. There is nothing to prevent a government from paying off a loan to which no sinking fund is attached by buying it up in the market or, if provision is made for redemption at a fixed price, by redeeming it. Nor is the establishment of a sinking fund a guarantee that the principal of a loan will in fact be paid off as originally intended, even if the sinking fund is in no sense raided: for there is nothing to prevent a government from effecting new borrowings *pari passu* with paying off the old loan. None the less, the legal establishment of a sinking fund at the time loans are floated is of real effect in promoting repayment; for it is politically much more difficult for a government in difficulties to raid an established fund, or to fill it by borrowing, than it is for it simply to refrain

the financial stability of the State is liable to be damaged at the time, while later on, when the exceptional expenditure has been completed—e.g. at the close of a war—the country will be confronted with an increase, instead of, as it will naturally expect, with a decrease of taxation; and this will lead to grave discontent. But, though it is clear that resort to loans ought not to be had in any fuller measure than these limits allow, it is not clear that resort ought to be had to them up to these limits. The issue must be raised: Should the types of expenditure here under review be financed entirely by loans subject to the above limits; or entirely by taxes; or partly by loans and partly by taxes? It is the purpose of the following paragraphs to set out the principal considerations relevant to this issue.

§ 4. It is a common belief that, when an enterprise is financed out of taxes, the cost of it is borne by present taxpayers, but that, when it is financed out of loans, the present generation, since the lenders get value for their loan, bears no real cost, the whole of this being borne in future years and represented in the money which then has to be found to provide interest and sinking fund. Anybody who believes this naturally holds that the question whether and how far an enterprise ought to be financed out of loans turns on the question how far future years will benefit by it. Thus, it is frequently argued that the Great War was properly financed in large part by loans, because, it is asserted, by means of that war posterity has been protected from enslavement. It is desirable to examine this line of argument in detail.

§ 5. Let us consider first the view—a not uncommon one ^{in the literature} that, apart from any effects which the choice between loans

from setting aside money, not specifically called for by a previous undertaking, for discharging debt. It may be added that, when a sinking fund is decided upon, it may take the form either of a fixed annual sum to be devoted towards providing interest and repayment of principal throughout the period of the loan, or of a fixed annual sum for repayment of principal *plus*, each year, the sum required in that year for interest. This latter plan involves a less violent change than the other in the year following the completion of repayment, and is also somewhat less likely to be abandoned in the later years of the loan. (Cf. Pierson, *Principles of Economics*, vol. ii. pp. 629 *et seq.*)

and taxes may have upon the sources from which funds for expenditure are drawn, whenever a loan is resorted to, a special burden, measured by the money which they have to raise for the service of the loan, is necessarily thrown upon future generations. When loans are raised from foreigners, it is, of course, true that future citizens of this country as a body are subject to a special burden of this character.¹ But, when loans are raised at home—and, of course, the great bulk of government loans are so raised—the situation is entirely different. To facilitate study of it, it is well to distinguish between the payment of interest on the government debt and the repayment of principal through a sinking fund. So far as interest is concerned, it is obvious that what is taken from the income of taxpayers in taxes goes into the income of holders of loan stock, and that, therefore, all that happens is a transfer of income from one section of the community to another section, and, in so far as taxpayers and loan holders are identical, from one pocket to another pocket in the same coat. Plainly, in a transfer of this kind, it is impossible that any *direct objective burden*—I am not at present concerned with other sorts of burden—can be involved. There remains the money raised for repayment of principal through a sinking fund. As regards this, it has been claimed by certain writers that the preceding argument is inapplicable. They reason that, when a holder of loan stock has the principal of his loan paid off by the government, he receives no benefit, but is simply left in his old position, or possibly a slightly worse position, because he will have the trouble of finding a new investment; and that, therefore, there is nothing to set against the objective burden thrown on the taxpayer in the form of taxation to provide the money to pay him. Professor Seligman writes: "The fallacy involved in the contention that the sacrifice imposed upon the future taxpayer is counterbalanced by the benefit accruing to the bondholder consists in the failure to realise that there are

¹ It must be remembered, however, that if a domestic loan were resorted to instead, a portion of this would certainly be "taken out of" capital, so that the aggregate available income of the country afterwards would not be augmented to the full extent of the interest saved on the foreign loan. (Cf. ante, Part I. Chap. III. § 4.)

no benefits thus accruing to the bondholder." ¹ Professor Scott arrives by similar reasoning at the same conclusion: "Speaking quite generally, the effect of a loan [he is discussing an internal loan] is that posterity is rendered liable to do the amount of work which is necessary to pay it off." ² The substance of this argument is that, since, in the main, repayments of principal made to holders of loan stock are certain to be reinvested, posterity as a whole will be forced by the process of debt repayment to create new capital, and so to refrain from consumption, to approximately the extent of the debt repayment. Let us provisionally accept this presentation of the facts. Even so, to suggest, as the language used by Professors Seligman and Scott seems to do, that there is a *direct objective burden* on posterity equal to the amount of the debt repayment is highly paradoxical. Posterity will possess the new capital which it has been induced by the fiscal expedients of the State to create. We have no right to ignore this possession. To do so is as though one should say that a man, who has been induced by circumstances to put £100,000 into a factory instead of into a yacht or a feast, is thereby made poorer to the extent of £100,000 than he would otherwise have been. If there were reason to suppose that the world would end immediately after the investment had been made, there would, indeed, be something to be said for this view. But no cosmical catastrophe is in sight, and posterity may be expected to reap the fruit of its investments in the same way as its ancestors. Thus, though it is true, as Professor Seligman asserts, that the bondholder gets no benefit from debt repayment, it is also true that the taxpayer suffers no loss. What he, in effect, does is to make an investment of certain funds, the proceeds of which will serve in future years to keep the bondholder's position intact and so to relieve him (the taxpayer) of the need for making annual contributions out of his income for this purpose. On posterity as a whole no *direct objective burden* is imposed by the repayment of an internal loan, any more than by payment of interest upon it. The payment of interest and the repay-

¹ *Annals of the American Academy*, Jan. 1918, p. 64.

² *Economic Journal*, Sept. 1918, p. 258.

ment of principal alike are transfers, not costs, and to whatever is somewhere lost there corresponds elsewhere an exactly equivalent objective gain.

§ 6. It does not, indeed, follow from this that no difference is made by the choice between the two methods in the *subjective burden* borne by future generations. It may well be that it is of this, rather than of the *objective burden*, that both Professor Seligman and Professor Scott are really thinking—though to interpret them so involves a rather generous straining of their language. Let us, therefore, consider the effects upon subjective burden. To simplify the discussion I shall begin by studying a representative man so situated that what he pays in taxes to finance the national debt exactly corresponds to what he receives in interest and in repayment of the principal of his loan holdings. In these circumstances it is plain that the money for interest merely comes out of one pocket and goes into another, and that a subjective burden is excluded as completely as an objective one. But with the part of the tax used to repay principal the position is a little different. In effect £100 has been taken from our representative man in taxes and then paid back to him as a price for cancelling his £100 bond. If this procedure had not been gone through, this £100 would have remained in his disposable income, and would, we may suppose, have been spent. As the procedure has been gone through, he realises that, should he spend the £100, his capital will be £100 less than before, and his future income, therefore, £5 less. He will, therefore, it would seem, need to save the greater part of that £100 and invest it, so as to keep up his capital and conserve his future income; and that new need will involve a real subjective burden. This reasoning, however, ignores the fact that, though, if he does not save that £100, his future income will be £5 less, his future taxes, out of which loan interest is paid, will also be £5 less, since the £100 of State loan, to provide interest on which the taxation is required, has, *ex hypothesi*, been cancelled. When account is taken of this fact, it becomes clear that, in a stationary community, the representative man's net income, after taxation has been deducted, will be exactly the same in the

future as it has been in the past. His position as a whole, therefore, is not damaged in any way, and there is no reason why, to safeguard himself, he should save that £100 which he would normally have spent. In a progressive community, indeed, the prospective escape from taxation will not fully balance the prospective loss of interest, because the representative man may reckon that, as general wealth and population increase, the amount of taxation, which he personally will have to contribute, will fall.¹ This, however, is a small matter. Apart from it, we may conclude that, if the representative man realises the whole situation, he will suffer no subjective burden in consequence of debt repayment. No doubt, it is probable that in practice he will not realise the whole situation, and will not perceive that his loss of capital is balanced by his relief from prospective taxation. So far as he fails to perceive this, he *will* be pushed into saving part of the £100 which he would normally have spent, and so *will* suffer a subjective burden. This appears to be the leaven of truth in Professor Seligman's and Professor Scott's reasoning. Relatively to the main issue, it is, however, an unimportant consideration.

§ 7. Another relevant factor is the effect on the future of the fiscal technique made necessary then by contracting government loans now. The raising of taxes, even for transfer within the country from the left-hand to the right-hand pocket of the same man, is not a wholly innocuous proceeding. There are costs involved in the actual process of tax levy, and there are, in general, as our studies in Part II. made clear, indirect injurious consequences associated with the reactions that the taxes set up.² This burden on the future must not be ignored. Plainly, however, it is something of an entirely different order from a burden measured by the amount of the tax levy, such as popular thought envisages.

§ 8. What has been said must not, however, be interpreted

¹ The further suggestion that, in a progressive community, the rate of taxation required to finance the national debt will fall through loan conversion is obviously irrelevant, since conversion would reduce loan interest equally with the taxation needed to provide that interest.

² Cf. also *post*, Chap. VI. §§ 4-5.

to mean that, apart from this relatively small burden, it is indifferent to future generations whether expenditure now is met out of taxes or out of domestic loans. This would only be true if the choice between taxes and loans left unaffected the sources out of which the real funds used up in the expenditure were drawn. In Chapter IV. of Part I. the several sources were distinguished. They were found to consist of extra work, economies in consumption, letting existing capital equipment run down, refraining from the manufacture of new capital equipment for private concerns and the actual using-up of pieces of existing capital. It was shown that resources obtained by extra work and by economies in personal expenditure come, in the main, out of income and hit the present only, whereas resources obtained by refraining from new investment, by letting equipment run down, by selling property to foreigners and so forth come out of capital and hit the future. When a given sum of money is raised by the government from anybody, and he does not shift the task of shouldering it on to somebody else, the choice that he makes between these various sources is not, of course, determined exclusively, or even in the main, by the form in which the levy is made upon him. It is open to him to meet the claims of taxation out of capital and those of loans out of income. The size of the contribution he is called upon to make is a much more important factor than the form of it in determining the sources from which he elects to provide it. But the choice which the government makes between taxes and loans has some effect upon the choice he makes between drawing upon income and drawing upon capital. What this effect is we have now to investigate in detail. The relevant analysis, it will be seen, is very similar to that set out in another connection in § 6.

§ 9. Let us begin by supposing that the loan contemplated as an alternative to taxation is not a voluntary but a forced one, and that it will take from each individual exactly the same sum as, under the rival plan, would have been taken from him in taxes; and let us suppose further that each lender is given to understand that, of the taxation required to pay interest and sinking fund on the government debt

created by the loan, he will have to provide a proportion exactly equal to his proportion of loan-holdings. It is possible to imagine a world in which the levy of a forced loan on these terms would have the same effect as the collection of an equal sum of money by taxation. To tell a man who expects to live for ever, in a country where the rate of interest is always 5 per cent, that he must surrender £1000 now, is approximately the same thing as to tell him that he will have to surrender £50 a year from now onwards for ever: or, to put the point otherwise, to take from him £1000 now in taxation is approximately the same thing as to borrow from him £1000 on a loan at 5 per cent, at the same time informing him that the £50 interest to be paid on his loan will be collected every year by that amount of taxation levied on himself. I have said that these two things are *approximately*, and not exactly, the same, because the loan plan would leave the £1000 in our citizen's possession, and thus available to fall back upon in an emergency, while, on the tax plan, he would be deprived of this standby. But, if we carry our supposition further and abolish all economic friction, it will appear that our citizen could not make use of his £1000 for an emergency without sacrificing £50 a year in interest afterwards, and—always apart from economic friction—if he were prepared to do this, he could, on the rival plan, borrow £1000 for the emergency. On these suppositions the two plans would work in *exactly* the same way, and no one who understood what was being done would act otherwise if confronted with the one than he would do if confronted with the other.

§ 10. Let us now return by degrees to the actual world: and, first, let us reintroduce economic friction. What this means from the present point of view is that, when a person has collateral to offer, even though he is subject to extra taxes equivalent to the interest on the securities which this represents, it is practically very much easier for him to borrow from bankers, not merely in an emergency, but on any occasion, than it would be otherwise. He is, therefore, likely to consider himself slightly more hurt by a tax than by an equivalent loan: and he may, in consequence, make

slightly greater efforts to meet the impost by harder work and by economy of consumption. In view, however, of the fact that most people rich enough to be subject to large levies have already ample securities, which, at need, they can pledge or sell, this effect is probably small.

§ 11. A more important consideration is as follows. In practice, when a man is forced to lend £1000 at 5 per cent, it is not possible to decree that the £50 required annually to pay him his interest shall be taken in taxes from himself. The tax system may be designed to effect this object, and may succeed in effecting it at first. But taxation cannot be worked by way of poll taxes; it must be based on some objects—income, expenditure, commodities or what not. Hence, whenever any given amount of future taxation has to be provided for, the portion of it that will fall on any particular individual cannot be determined beforehand. It will depend roughly on the ratio at the time between his income and the aggregate income of the community, and this ratio is liable to be modified, not only by what he does, but also by what other people do. The tax method of raising money, therefore, means to any citizen the loss in after years of the interest that he would have received on the money he is forced to give to the government: the (forced) loan method means the loss in after years of an amount of taxation, which may exceed or fall short of this sum, according as his income comes to constitute a larger or a smaller proportion of the aggregate national income. This necessary looseness of connection between loans and the future taxation that a lender will have to meet towards providing his own interest leads to too little attention being paid to the debit side of the account under the loan method. People in general may, therefore, be expected to think themselves *considerably* less hard hit under the loan plan than under the tax plan. Consequently, they will be appreciably less keen to meet the call upon them by economies in consumption and increased output of work. So far as this happens, the capital of the community will be depleted appreciably more under the loan plan than under the tax plan, and the real income of the country accruing in future years will suffer in proportion.

§ 12. Hitherto we have supposed the loan plan to be carried out by way of a forced loan, taking from each citizen exactly the sum that would have been taken from him under the tax plan. In actual practice, however, loans are generally voluntary, and large subscribers have good reason to hope that the interest on their holdings will exceed the contribution in taxes which they will have to make to provide this interest ; for experience has never yet revealed a tax system graduated for increasing incomes anything like as steeply as loan subscriptions are likely to be graduated, at all events when the loan required is large. Hence, the richer classes, from whom, when a large amount of money is wanted, contributions under any plan must chiefly come, will think, and rightly think, that a loan hits them much less hardly than equivalent taxation would do. They are, therefore, less likely to be induced to check consumption or to work more strenuously, and more likely to subscribe to government only such resources as they would otherwise have invested in industry. Consequently, the check to the provision of capital for industry will be more serious than under a forced loan. It appears, therefore, that the popular instinct is, in some measure, justified. Finance by loans does hit capital and, through this, the economic fortunes of future generations *somewhat* more hardly than finance by taxes.

§ 13. It follows that the question how far the benefit of an enterprise may be expected to extend into the future has some bearing upon the issue between tax finance and loan finance. There is something more to be said for financing out of loans the clearance of slums, the building of a modern Parthenon or the conduct of a defensive war than there is for so financing an enormous firework display. But the relations between tax finance and present burden and between loan finance and future burden are not intimate enough to give to this class of consideration a dominating, or even a large, importance.

^{new name} § 14. I turn to a second consideration—the effect of the choice between tax finance and loan finance in determining how far the real costs of an enterprise are borne by people of

different degrees of wealth. If the enterprise in question is one the costs of which are small, there is no reason to suppose that they will be distributed in a significantly different manner under the two plans. Whether extra taxes are raised this year to pay for the enterprise outright or extra taxes of smaller amount are raised in future years to pay interest on a loan raised now, the proportionate part of the tax burden borne by different classes is likely to be left pretty much what it would have been had the enterprise not been undertaken at all. But with enterprises the costs of which are large the case is different. The amount of resources which it is possible for a government on any plan to draw in a short time from the poor is strictly limited. The available margin among them is, both for individuals and for the poor as a group, small. Consequently, when a large sum has to be raised in, say, a single year, it is *necessary* that by far the greater part of it shall be raised somehow from better-to-do people.) Furthermore, as we pass up the scale of wealth, every increase in an individual's income means, not merely an increase in the available margin of resources, but an increase which grows more than in proportion to the growth of income. If one man is twice as rich as another, other things being equal, his available margin is not twice as large, but more than twice as large. (Hence, of the money needed by the State the rich man *must* provide, in one way or another, more than the poor man, and the very rich man more than the moderately rich man; and the amount provided *must* increase, not merely proportionately, but progressively as wealth increases. Now, if the practical choice was between the provision of money in these proportions by taxes and by loans—the distinction between compulsory and voluntary loans is here irrelevant—the *revenue to pay interest on which would afterwards be assessed on the different classes in these same proportions*, there would be no difference between the distributional effects of the two plans. But, if the above italicised condition is not appended to the loan plan, there is a very important difference. In fact, that condition is very unlikely to be fulfilled. Taxes afterwards are sure to be assessed on poor people in substantially larger proportion

than their contribution to loans. Hence, whereas the tax method throws on rich people at the time a larger share of the burden than they are accustomed to bear of ordinary national charges and does nothing else, the loan method, while operating similarly at the time, arranges, in effect, that these rich people or their successors shall afterwards be partially compensated for their large immediate burden by moneys extracted in their interest from poor people. Looking at the matter broadly and taking a fairly long view, we may say that under the tax method rich people will bear a much higher proportion of the charges incurred than they do of normal charges; under the loan method they will bear a proportion somewhat, but probably not much, larger than that.

This *a priori* conclusion is borne out by the history of recent happenings. In Great Britain in 1925-26 the net produce of income tax and super tax was 295 millions and of death duties 50 millions, making 345 millions in all, while the interest on the internal debt amounted to 273 millions. When to this is added management expenses and, say—to make allowance for foreign debt—six-sevenths of a fifty million sinking fund, it appears that practically the whole of the contribution to the national revenue made by the income-tax paying class was absorbed in financing a debt in the main held by members of that class, nothing being left over for general government services. It is certain that, had the war been financed out of taxes, so that no aftermath of internal debt remained, the income-tax paying class would have been called upon for a very substantial contribution towards these general services. Thus resort to the method of loans has enabled them to escape, at the expense of poorer persons, from a heavy burden of charges, which, had the tax method been more largely employed, they must inevitably have borne.

Our judgement, therefore, as to which of the two methods is to be preferred in any given case must turn in part on the purpose which the expenditure to be financed serves. If, for example, its purpose is to remodel at the State's charge the housing conditions of the poorer classes throughout the

country, there is less to be said for throwing a main part of the burden on the better-to-do than there would be if the purpose were, for example, to cover the country with a system of roads adapted for motor-touring. In order, therefore, to determine the comparative advantages of the tax method and the loan method from the side of distribution, it is necessary to know the nature and purpose of the expenditure that has to be financed.

§ 15. I do not propose to pursue that inquiry into all its ramifications. But the general character of the problem may be usefully illustrated by reference to the finance of the Great War. There the object aimed at by the expenditure was political—self-defence, the enforcement of treaties, the security of small nations or what we will : and the costs of conducting the war were colossal. Our problem is, assuming the distribution and the general principles of graduation adopted in the tax system of this country to be fair and proper for ordinary purposes, would it have been fair and proper also to apply these same principles to the financing of the war ? For this is in substance what is done if war costs are met from domestic loans, on which interest and sinking fund are paid out of taxes based on these principles. On this matter the relevant factors are two in number. First, when, as in normal times, what is wanted is a regular annual revenue, it is natural to base taxation in a general way upon income.¹ But, when a single and entirely abnormal expenditure has to be met, ability to pay is best reflected, not in the income that happens to accrue in that particular year, but rather in income-getting power or capital—this term being taken to include objects of wealth not used in trade, such as houses and pictures, and also the capitalised value of a man's mental and manual powers.² Since £100

¹ Cf. *ante*, Part II. Chap. XII. § 3.

² It is not, of course, suggested that the costs of a war can be paid for out of capital, in the sense that a person's holdings of land or factories or railways (except so far as they are saleable abroad in return for "income") can actually be used for war purposes. The main source of the funds raised must, as was shown in Part I. Chap. IV., be the real income of the country. None the less, it would be possible for the government to collect a large part of what is required for war from persons who have no income at all, but only property. If £1000 were taken from such a person, he would

of earned income; being terminable with life, represents much less capital than £100 of income derived from the funds, and since funded and other property is held predominantly by the rich, this consideration suggests that war charges ought to be thrown upon the rich in a greater proportion than the principles appropriate to peace taxation would warrant. Secondly, there is a general feeling that, in a pre-eminent national emergency, the call from each should be for his *utmost* rather than for his *share*. Men are required to give of their physical strength, not in equal proportions, but from each his all. There is no question of proportionate sacrifice between men of fuller and emptier lives. Indeed, the strong are taken and the weak rejected. It is difficult to see what ground of equity there can be for any different distribution in the summons to financial strength. But this is certainly not the distribution aimed at in the ordinary tax system; and, therefore, some departure from the principles that underlie that system seems to be called for. This suggests that, from the standpoint of a sound distribution, a great war ought not to be financed predominantly by loans, interest on which will afterwards be provided out of ordinary taxes. Rather, a large part of the costs should be met by taxation levied at the time, on principles calculated to throw a much greater proportion of the burden on the rich than they are accustomed to sustain under the ordinary forms of taxation.

§ 16. There is a third consideration bearing on the comparative advantages of tax and loan finance, to which brief reference should be made: namely, their comparative effects in leading to an expansion of bank credits, and so to a general rise of prices; In Chapter III. the policy of credit creations on behalf of government as a means of war finance will be examined, and will be shown to lead to many undesirable consequences. Exactly the same consequences will follow if, instead of the credits being created directly for

have, in effect, to buy with £1000 worth of property £1000 worth of real income from somebody else, and to hand this over to the government. He would be the *subject* of the tax, though his property would not be the *source* of it.

government, they are created for private persons, who use them as a means of making the payments to government that are due from them. Now, both under the tax system and under a loan system, it is possible for people to resort to credit creation to some extent. There is reason to believe, however, that, if a given sum of money has to be contributed to the government, the contributor is likely to resort more largely to credit creation for a loan payment than for a tax payment. The reason is partly that, as already indicated, under the loan method he does not feel himself to be so hardly hit, and is, therefore, less keenly impelled towards harder work and greater personal economies, and partly that loan scrip is excellent collateral, on which banks will be ready to lend him money. This consideration tends *pro tanto* against the policy of finance by loans.

§ 17. When the various considerations set out in the preceding paragraphs are reviewed together, the impression created on most minds is likely to be that, at all events for large non-recurrent expenditures of a non-remunerative sort, it is, in general, desirable that taxation should be resorted to in amounts substantially larger than the minimum amounts indicated in § 3. Some authorities have gone so far as to hold that, for expenditure of this sort, resort should be had exclusively to taxation. Thus Professor Bastable writes: "Non-economic (i.e. non-remunerative) expenditure is primarily to be met out of income, and, unless it can be so dealt with, ought not to be incurred." National culture, education, the promotion of social progress are all most desirable; but their promotion is not so pressing an object as to need the use of borrowing by the public powers. It is, indeed, true that much of State expenditure may be regarded as indirectly productive, and as likely to add to the national income in the future. A loan for the purpose of extending education, or for improving the housing of the workers, though it does not directly provide the interest needed, may yet so increase the income of the community as to make the tax receipts greater, without any increase either in rates or in rigour of collection. Regarded in the abstract, such a proceeding seems defensible: the real objections to

it arise from the difficulty of application. The results of expenditure of the kind are hard to trace or measure, and any statement respecting them must rest in a great degree on conjecture. The cost of the loan is definite and precise, and it constitutes a real burden on the resources of the society. Prudence seems accordingly to suggest that borrowing should hardly ever be adopted except for strictly economic expenditure, and then only when the extension of the State domain is clearly advisable."¹ (This strict rule points, I think, the right path in all ordinary circumstances. In the special case of a great war, however, it cannot be followed unreservedly. Very large revenues are needed at once, and these can be collected more quickly through loans than through taxes. Moreover, much less immediate disorganisation will be caused, since free funds can be tapped wherever they are, and those people, who are, for the moment, short of available balances, are given time to accumulate them. These considerations apply only to the very beginnings of a war. But there are also further considerations arising out of the fact that wars may last for a number of years. When this happens, or there is fear of this happening, taxation acts, not merely through the fact of it at the moment, but also through the expectation of its continuance *during* the war. Just in so far, therefore, as it is thought by the people subjected to it to hit them more severely than the loan method would do, the knowledge that a large part of the fruit of any exertions they make will be absorbed by the State may, in spite of the patriotic stimulus that wars provide, seriously lessen their exertions. Had that part of the expenses of the Great War which was defrayed out of domestic loans—even apart from creations of bank credit—been defrayed instead out of taxation, not only would the standard rate of income tax have had to be enormously higher than the 6s. level which it actually attained, but a great mass of other taxation must also have been imposed. Such a state of things continuing for several years might well have led to a serious contraction of that real income of services and goods from which alone the real war fund could

¹ Bastable, *Public Finance*, Book v. chap. v. pp. 621-2.

be drawn. This, to a statesman caring above all things to secure victory, or, at all events, to avoid defeat, is a consideration of supreme importance. It explains and, in the opinion of some persons not unqualified to judge, excuses what many economists deemed the undue hesitation, even of the British Government, in the use of taxation to finance the Great War.

CHAPTER II

THE TECHNIQUE OF WAR LOANS

§ 1. WHEN a strong government wishes to raise a loan of moderate amount, it is never likely to have any difficulty in doing this on terms substantially equivalent to those represented by the rate of interest in relation to the market price of existing government obligations. In a great war, however, the position is different. The government has need of enormous resources. If it fails to obtain them out of taxes and loans, it will be forced either to cut down its military expenditure, thus endangering the war position, or to rely in excessive measure upon the creation of bank credits, resort to which, as will be shown in the next chapter, involves highly injurious reactions upon prices and distribution. In conditions of strain it is essential to ensure a large flow of loan money into the Treasury, and exceptional efforts to bring about this result may properly be made.

§ 2. The most obvious means to adopt is, of course, that of offering very high interest for money loaned voluntarily in the ordinary way. For the sake of future budgets every government will, however, be disinclined to push this means very far. To some extent their unwillingness is unjustified. For, in so far as the alternative to high interest on war loan is the creation of more bank credits, this creation means raised prices, which, in turn, mean a larger capital debt on given government purchases; and, on the assumption that prices afterwards fall again, future budgets may be just as much burdened by a larger debt at lower interest as by a smaller debt at higher interest. Against high interest rates there is, however, a serious political objection. One country

dares not offer loans at a much higher rate than its opponents in war, for, if it does, public opinion in neutral countries may suspect its financial strength, and neutral governments are more likely to take sides against it. From this point of view it is sometimes found desirable to camouflage the real terms on which a loan is offered, so that only persons concerned with business will understand them. Thus advantages may be given, not in the nominal rate of interest, but in issue below par value, in premiums on repayment or in special privileges in the matter of taxation.

§ 3. It is also possible to increase the attractiveness of loans without any improvement in the actual terms offered by so arranging their forms as to appeal to a wide range of tastes. Thus, in the Great War the British Government issued war savings certificates, to be repaid in a lump sum with accumulated interest after an interval of several years, long-dated war loans, short-dated Exchequer bonds, and six or twelve months' Treasury bills for the money market. Spectacular loans to be subscribed for between definite dates alternated with "continuous borrowing" by means of Exchequer bonds always "on tap". Great efforts, in short, were made to render the government's securities suitable for all classes of investors.

§ 4. To these methods there is added in war-time the special appeal to patriotism. This may take the form of propagandist advertisement through newspapers, public meetings, "tank weeks", the stimulation of competitive endeavours among different towns to break one another's record of subscriptions, and so on. Appeals to patriotism are not, however, by themselves apt, in the monetary sphere, to prove very productive. It is difficult to tell, for example, how far "tank weeks" really yield money, or how far they merely cause money to be subscribed in a particular way or at a particular moment, which would in any case have come in to the Treasury somehow.

§ 5. Alongside of this positive method of stimulating the flow of war loan there may also be employed the negative method of cutting off from private people alternative ways of employing their money. The available alternative ways

are (1) buying new output of capital goods, such as plant or machinery or raw material; (2) buying new output of consumable goods and services, such as food or travel; (3) handing over money and the right to dispose of it to other people in exchange for existing properties or for promises of future interest payments. Since the persons to whom money is handed over in this last way can in turn, if they do not put it into war loan, only buy with it either new output of capital goods or new output of consumable goods, these two sorts of purchase are ultimately the only alternative employments for money besides war loan. The negative method of stimulating the flow of war loan consists, therefore, in blocking up, in greater or less degree, these channels.

at § 6. This method has limitations which it is important to realise. At first sight we might be inclined to suppose that, if people are compelled to reduce their expenditure on any single sort of article, the fund available for war loan subscriptions is necessarily increased to some extent. This, however, is not so. Though it must follow that more of the particular article, on which expenditure is retrenched, will be set free for government, it need not follow that a larger aggregate sum of real resources will be set free. If the purpose, which a prohibited or restricted article serves, is very urgent, and if it can also be served more or less by some other article that is not restricted, prohibition or restriction will press purchasing power towards this rival article. If people do not much care about satisfying the purpose, and if the rival article is more expensive and inconvenient, no great volume of productive resources will be directed to it, and the resources secured by withdrawal from the prohibited or restricted article will be almost entirely a net saving. But, if people care a great deal about the purpose which the State is obstructing, they may insist on satisfying it somehow at whatever trouble and cost; and it may then happen that the roundabout method, to which they are compelled to resort, actually absorbs more productive power than used to be needed before. A good illustration is afforded by the imposition of duties upon certain classes of imports unaccompanied by excise duties on analogous products (e.g.

rival types of motor-car) made at home. Instead of causing people to employ less capital and labour, represented by less money, for the need they used to satisfy by importation, the imposition of these duties *may* cause them to satisfy that need through increased manufacture of the home products at a greater aggregate cost in capital and labour, represented by a greater sum of money, than used to be required to make exportable goods with which to buy the imports. Of course, the prohibition or restriction of selected articles will not always fail to check the aggregate volume of resources, and their representative money, that is devoted to private service. But it is much more likely to fail than peoples and governments generally understand, and, if it is to succeed, great care must be exercised in the choice and grouping of the things selected for State discouragement. Nor is this all. Waiving the above consideration, we have still to observe that there are a large number of different types both of capital goods and of consumption goods. If, therefore, the routes leading to only a few of these are blocked up, however skilfully these few are selected, only a small part of the resources which the blocking extrudes from them is likely to become available for war loan: the main part will be scattered among other employments that are not restricted. From this it follows that, in ordinary conditions, there is little use in restricting other openings as a means of stimulating the flow of resources to a particular opening; for in such conditions it would be feasible to restrict only a very few openings.

§ 7. In *abnormal* conditions, however, these limiting considerations are of minor importance. Restriction can be applied so widely that the principal non-restricted opening, namely, war loan, may be expected to reap a large part of the fruits of it. Thus, in the Great War private expenditure on capital goods was blocked directly by a strict limitation, through priority certificates, of the purchase by private persons of a number of important structural materials. It was also blocked indirectly by Treasury Orders which (1) forbade altogether the private investment of capital in foreign countries, (2) severely limited investment in the

outlying portions of the British Empire, and (3) forbade the raising of capital for investment in the United Kingdom without a licence from the Treasury—a licence only being granted if a good case could be made out. In like manner, private expenditure over a large range of consumable goods was blocked by rationing and by restrictions, made necessary by the shortage of ships, on the importation of many luxury and semi-luxury articles.

§ 8. If these methods prove insufficient, there remains the possibility of a forced loan. On this plan assessments are made on the citizens of the country, based partly on their normal assessments for income tax, which is the most easily available index; and they are compelled to lend to the government defined sums on terms arbitrarily fixed and embodying a rate of interest substantially less than would be required to secure a voluntary loan of equal aggregate amount. This device is really a cross between a voluntary loan and a tax. From the point of view of the government it is inferior to a tax, because it involves some promise of interest. From the point of view of the public it is inferior to a voluntary loan, both because it earns less than the market rate of interest and also because it sacrifices an important incidental merit of voluntary loans, namely, their discriminating action as between persons of equal wealth but in different situations. Of two such persons, for example, one of whom is half-way through the building of a factory, while the other has no special call on his income, the second will naturally take up a much larger share of a voluntary loan. Under a forced loan, however, just as under a tax, these men will have to make equal contributions, and, though the factory builder will probably be able to arrange things somehow by borrowing himself, yet, unless he happens to have a considerable amount of suitable collateral, he may find it very difficult, expensive and inconvenient to do this; while at the same time the other man will be in possession of resources which the government is not tapping. Arithmetically to raise from anybody a forced loan of £1000 at $2\frac{1}{2}$ per cent is the same thing as to raise from him taxes to the extent of £500 together with a

voluntary loan of £500 at 5 per cent. More generally, it would seem that, by a suitable combination of taxes and voluntary loans, it must always be possible to achieve a result substantially equivalent to that offered by a forced loan. There is, therefore, nothing to be gained by resort to that device, unless, indeed, public opinion, usually very hazy upon these matters, is of such a character as to make it politically expedient.

CHAPTER III

FINANCE BY BANK CREDITS

§ 1. WE have now to consider more closely, in contrast with loans of the sort we have been studying hitherto, the type of government borrowing referred to in Chapter I. § 16, namely, borrowing through the manufacture of bank credits. This type of borrowing, supported by abnormal issues of fiduciary notes, was largely resorted to during the war in all the principal belligerent countries, including the United Kingdom. I propose in the present chapter to describe and discuss our national variant of this common method. In that way it will be easy to exhibit the general principles that are involved.

§ 2. It is customary for critics of British war finance to make use in connection with it of the term "inflation". It is, however, exceedingly difficult to find any definition of this term that is at all satisfactory. One popular definition asserts that inflation is an increase in money more than proportionate to the accompanying increase in production.¹ Since, however, this definition compels us to say that a bad harvest involves inflation, it is too far out of touch with the common understanding of words to be admissible. An alternative definition applies the term inflation to *that*

¹ This definition is, incidentally, thought to imply that "inflation is inherent in the flotation of a loan for purposes other than the construction of material reproductive capital", the idea being that, when the loan is employed productively, extra things are created to offset the extra money. Obviously, however, no more extra things are produced *at the time* when a factory is built than when a house is built, or even than when people are set to work to make fireworks or guns. More extra things are, no doubt, produced later on when the factory begins to operate, but this fact is not relevant.

part of the rise of prices that is consequent upon government interference with money and banking. Practically, however, it seems impossible to disentangle this part from the part that would have taken place, particularly in war, if the government had allowed monetary affairs to proceed along the usual lines. Furthermore, the notion of government interference with money and banking is not precise. Certain government acts, of course, clearly constitute such interference, but certain others—for example, the commandeering of foreign securities to support exchange and propaganda to persuade people not to present currency notes for encashment—are doubtful. Again, certain things, which cannot take place in England without very definite government interference, are permissible in other countries under the ordinary law. Thus, the fiduciary note issue of the Reichsbank might, under pre-war legislation, be increased beyond the normal maximum on condition that a tax was paid on the extra issues. In view of these considerations it would appear that the only really satisfactory way of defining inflation along these lines would be to make an arbitrary schedule of the various sorts of action, which, for the purposes of the definition, are to be regarded as government interference with money and banking, and the fruits of which, therefore, are to be called inflation. But, when we are driven to an artificial plan of this kind, there is much to be said for abandoning the term altogether, and in the following pages I do not propose to make use of it.¹

§ 3. During the Great War, and particularly during the earlier stages of it, the British Government, whether rightly or wrongly, was unwilling to push overt taxation beyond moderate limits, for fear of checking production and rousing powerful resentment. It was equally unwilling to put the rate of interest offered for war loan subscriptions above a moderate amount, lest our reputation for financial power should be damaged in the eyes of the world. As a result of these two things the amount of money obtained by overt taxes and public loans fell in most weeks considerably below the exigent demands of the army, navy, air force and

¹ Cf. my article on "Inflation", *Economic Journal*, December 1918.

munitions establishments. Given these conditions and given the determination to cut our cloth according to our coat and not *vice versa*, the only course open to the government, apart from direct resort to the printing press, was to fill the gap between income and expenditure by causing the banks, and particularly the Bank of England, to create credits in its favour. Several methods of doing this were available.

§ 4. The most important of these was that described in the *First Interim Report of the Committee on Currency and Foreign Exchanges*, 1918, in the following terms : " Suppose, for example, that in a given week the government require £10,000,000 over and above the receipts from taxation and loans from the public. They apply for an advance from the Bank of England, which, by a book entry, places the amount required to the credit of Public Deposits, in the same way as any other banker credits the account of a customer when he grants him temporary accommodation. The amount is then paid out to contractors and other government creditors, and passes, when the cheques are cleared, to the credit of their bankers in the books of the Bank of England ; in other words, is transferred from Public to ' Other ' deposits ; the effect of the whole transaction thus being to increase by £10,000,000 the purchasing power in the hands of the public in the form of deposits in the joint stock banks, and the bankers' cash at the Bank of England by the same amount. The bankers' liabilities to depositors having thus increased by £10,000,000, and their cash reserves by an equal amount, their proportion of cash to liabilities (which was normally before the war something under 20 per cent) is improved."¹ The banks are then in a position to do any one of three things without making the proportion between their reserves and their liabilities any smaller than 20 per cent. Having got 10 millions more reserve and also 10 millions more deposits, they may either (1) credit their customers with a further 40 millions of deposits, which these customers, we may suppose, devote to taking up Treasury bills or war loan ; or (2) themselves take up, out of their balances with the

¹ *Interim Report of the Committee on Currency and Foreign Exchanges*
p. 2.

Bank of England, 8 millions of Treasury bills or war loan ; or (3) lend the spare 8 millions of their balances to the Bank of England, to be lent by it in turn to the government.

If the first of these methods is adopted, the immediate result is as follows. The 40 millions extra deposits are transferred to the government's account at the Bank of England, thus, for the moment, reducing bankers' balances there by that amount. At the same time these 40 millions cease to count in bankers' deposit liabilities to customers. But the government forthwith expends the credit it has thus obtained, so that the 40 millions are again added both to bankers' balances at the Bank of England and to bankers' deposit liabilities. The final position then is as follows : bankers' balances at the Bank of England are 10 millions more than they were before the original ten millions of credit were created, and bankers' deposit liabilities to customers are 50 millions more, while the government has spent and owes 10 millions directly to the Bank of England and 40 millions indirectly to the banks through their customers.

If the second method is adopted, the immediate result is that the banks have 2 millions more balances at the Bank of England than they had before ; 10 millions more deposits and 8 millions more Treasury bills or war loan. The government, however, forthwith spend the 8 millions of balances that have been transferred to them, and these, therefore, appear again as an 8 millions addition both to bankers' balances at the Bank of England and to bankers' deposit liabilities to customers. We thus have a second stage, with bankers' balances at the Bank of England again 10 millions up and bankers' deposits now 18 millions up. The bankers have thus still a too favourable proportion ; they only need one-fifth of 18 millions out of their 10 millions Bank of England balances, and are, therefore, in a position to take up a further $6\frac{2}{5}$ millions of Treasury bills or war loans. When the government spends the balances with which the banks do this, we have a third stage : bankers' balances at the Bank of England 10 millions up ; bankers' deposit liabilities $24\frac{2}{5}$ millions up. It is obvious that this process will continue until eventually the bankers have taken up 40 millions of

Treasury bills or war loan, and are left with deposits of 50 millions against balances at the Bank of England of 10 millions. Thus, this method leads in the end to the same result as the other method, save only that the government debt of 40 millions on Treasury bills or war loan is a direct debt to the banks instead of an indirect debt to them mediated by their customers.

On the third method distinguished above the banks lend their 8 millions of spare balances to the Bank of England, to be lent by it to the government. On this plan the 8 millions come back, when the government spends them, both into bankers' balances at the Bank of England and into bankers' deposits; and the same process as on the second method is carried through, with the final result that bankers' balances are 10 millions up and bankers' deposits 50 millions up. The government's debt of 40 millions (in addition to its original 10 millions debt to the Bank of England) is still a debt to the bankers, but this time mediated, not through their customers, but through the Bank of England. Thus all three methods come in the end to exactly the same thing.¹ There is an original creation of 10 millions credit from the Bank of England to the government, and a subsequent creation of 40 millions from the other banks, which, in one or another way, is made available to the government, the two creations together involving an addition of 50 millions to the deposit liabilities of banks other than the Bank of England, based on an addition of 10 millions to their holdings of "cash in hand and at the Bank of England".

§ 5. Credit creation may be initiated otherwise than by a draft of 10 millions on Ways and Means from the Bank

¹ It has been suggested that, at one period during the war, some of the banks counted the debt due to them from the Bank of England on account of their loaned balances as "cash in hand and at the Bank of England", and not as money at call or short notice, and so included it in the reserve on which their proportion is based. Obviously, if they did this, they would be in a position to lend a literally infinite amount to the Bank of England for reloan to the government without reducing this proportion below 20 per cent; for each million of balances transferred thus would, after it had been spent by the government, appear as a net addition of a million to deposits and also to reserve. There is no means of knowing how far, if at all, this policy was in fact adopted.

of England. The Government may directly ask for subscriptions to Treasury bills or war loan from the banks (other than the Bank of England). The banks draw on their balances at the Bank of England to the extent of, say, 10 millions, and buy Treasury bills or war loan. These balances are restored to their former level so soon as the government spends the 10 millions, but the deposits are increased by 10 millions. Consequently, the proportion of the banks' reserves to liabilities is diminished. To restore this proportion, they may call in their loans to customers to an extent equal to their 10 millions subscription to Treasury bills or war loan. If the customers simply do without the loans thus drawn in, the banks' deposits are brought back to the figure at which they stood originally, while the bankers' balances with the Bank of England are also at their original figure. But, if, as will almost certainly happen in fact, the customers go to the Bank of England and it finds money for them, they will draw cheques on the Bank of England and so increase, to the extent of the loan made to them by the Bank of England, at once the deposits and the balances at the Bank of England of their own banks. If this loan is 10 millions, it involves a 10 millions increase in bankers' balances at the Bank of England, and it, therefore, enables the banks to lend a further 40 millions to the government in Treasury bills in addition to their original subscription of 10 millions. It works in fact in exactly the same way as it would have done had the 10 millions Bank of England credit been created for the government instead of for private customers of the banks.

§ 6. Yet a third alternative is open. The bankers, being asked to subscribe 40 millions to Treasury bills or war loan, are able to do this without either cutting down their loans to customers or weakening their proportion, if they can add 1 million to their reserve against each extra 5 millions of deposit liabilities. To make this possible, the government may sell to the bankers 10 millions of currency notes to be held by them in their tills in exchange for 10 millions of their balances at the Bank of England. The balances thus obtained by the government come back to the credit of the

bankers when the government spends its money ; and the net result is an increase of 50 millions of deposits and of 10 millions of cash in the hands of bankers ; the government having raised 40 millions on Treasury bills and 10 millions in the form of balances at the Bank of England against a sale of 10 million notes to be held in bank reserves. Once again, therefore, we reach substantially the same position as before. For, from the point of view of the bankers, balances at the Bank of England and currency notes for banking reserves are on exactly the same footing. Both may be regarded indifferently as a step towards, or as a condition of, an aggregate credit creation of five times their own amount. If the government wishes for 50 millions of bank credits, it is a matter of indifference whether it provides the basis for this by getting a Ways and Means advance of 10 millions from the Bank of England or by selling 10 million notes (to be held as reserve) to the banks.

§ 7. The creation of additional purchasing power in the form of bank balances, whether it is brought about by one of the processes described above or, as happens more ordinarily, by an expansion in the proportion of liabilities that banks (other than the Bank of England) venture to hold against their reserves, tends to promote a more or less corresponding rise of prices. Under an effective gold standard, such as existed before the war and exists again now, this rise of prices, by encouraging imports and discouraging exports, turns the exchanges against us and threatens a foreign drain of gold. At the same time it makes it necessary for people to carry rather more money than before in their pockets and in their tills for the payment of expanded wage-bills and for the conduct of retail business on the higher price level. In this way it sets up a domestic drain. These two drains together, by lessening the reserve of the Bank of England, compel the Bank to raise its discount rate and to take steps, by selling government stock or otherwise, to make the new rate effective in the market. The higher rate tends to check borrowing. If it does not actually do this at first, it will have to be raised still higher until it does do it ; for otherwise the Bank would see its reserve completely exhausted.

The financing of any customer, the government or anybody else, by the creation of bank credits is thus, in normal times, held closely in check. If the government gets more, other people get less ; it gets in the main what business men are deprived of. In the Great War the position was entirely abnormal. The government had to finance itself, whatever rate of interest it had to pay. High discount rates, therefore, would not have stopped credit from expanding. Whether they had been applied or not, the government must have insisted on its loans—loans far greater than could be offset by even a total cessation of lending to private borrowers—and the gold reserve of the Bank of England would have continued to fall, had no safety-valve been opened, until the machine was smashed. It is true, indeed, that the external drain normally consequent upon credit creation could not manifest itself. For the export of gold by private persons was sufficiently provided against by the submarine peril and the refusal of the government to insure gold cargoes. But, unless a further basis of cash had been provided by direct State action, collapse must have come about through the internal drain. As the Committee on Currency and the Foreign Exchanges observe : “ The greatly increased volume of bank deposits, representing a corresponding increase of purchasing power, and, therefore, leading, in conjunction with other causes, to a great rise of prices, brought about a corresponding demand for legal tender currency, which could not have been satisfied under the stringent provisions of the Act of 1844. Contractors were obliged to draw cheques against their accounts in order to discharge their wage-bill—itself enhanced on account of the rise of prices.”¹ No doubt, had gold been flowing into the country as the result of an abnormally favourable trade balance, as it was in fact flowing into the United States during certain of the war years, the required basis of legal tender money would, up to a point, have been provided without any special State action. In these conditions bank credits could have been created on behalf either of the State or of private persons, and prices forced up, without any risk to the banking and

¹ *Interim Report of the Committee on Currency and Foreign Exchanges*, p. 5.

monetary system. The foundation of the pyramid would have been enlarged, as it were, by automatic process. But in European countries, except at the very beginning of the war, the tendency was towards an outflow, rather than towards an inflow, of gold. Hence, the required basis of legal tender had to be provided by other means. To this end in the United Kingdom currency notes, designed in the early days of the war for the quite different purpose of parrying a possible hoarding drain on the part of the public, were issued by the Treasury in continually increasing quantities. It has already been explained how the sale of currency notes against bankers' balances, to be held by the banks as reserves, would operate. We are now concerned with the sale of notes required by bankers to meet the cash demands of their customers. The effect of this sale of notes against balances *plus* the resale of the notes by bankers to customers against deposits was ultimately, after the government had spent the balances obtained in exchange for the notes, to leave both the bankers' balances at the Bank of England and bankers' deposits the same as before. The government obtained new purchasing power equal to the value of the notes sold, but these notes, entering as they did into circulation among the public, did not constitute a basis for further credit creations in the way that notes sold to banks and held by them as reserve did. In substance, therefore, the sale of notes against balances for passage into public circulation, while incidentally adding something to the purchasing power of the government, was, in the main, a device for preventing the pyramid of credit from being broken up under the pressure of an internal drain. Their issue enabled the banks to meet the cash requirements of their customers, consequent on the high prices for which the pyramid of credit was responsible, without causing a drain upon the banking reserve of the Bank of England. "Given the necessity for the creation of bank credits in favour of the government for the purpose of financing war expenditure, these issues could not be avoided. If they had not been made, the banks would have been unable to obtain legal tender with which to meet cheques drawn for cash on their customers' account.

The unlimited issue of currency notes in exchange for credits [belonging to other bankers] at the Bank of England is at once a consequence and an essential condition of the methods which the government found it necessary to adopt in order to meet their war expenditure."¹

§ 8. It is a matter of some interest to determine how far, if at all, the very complicated method of obtaining resources for the government that I have been describing has different effects from those that would have been produced by a straightforward issue of currency notes in direct payment for the government's purchases. Apologists of British war finance have made a great point of the fact that the printing press was not used in this way and that notes were only issued in response to business demands. At first sight it seems that this complacency is justified. For, on the plan actually adopted, the government's credits were obtained in the form of bank balances, and notes were only issued to support these balances: whereas, if the government had simply created notes to pay for its purchases, these notes would have formed a basis for a very much larger creation of bank credit. This distinction, however, rests upon the assumption that, if the government had issued notes in direct payment for its purchases, all the notes so issued would have remained, as it were, "alive". This assumption is not justified. If the government in any week had created and paid to contractors 10 million one-pound notes, the contractors, presumably, would have deposited these notes with their bankers, only keeping in their own hands for wage payments the same number as, on the plan actually adopted, they drew out of their account for this purpose. The joint-stock banks in turn would have deposited these notes with the Bank of England, thus creating balances to their credit there equal to the balances that, on the other plan, they would have created by book transfers, and, equally with them, available for the purchase of Treasury bills. So soon, however, as currency notes entered the Bank of England, they were automatically cancelled and

¹ *First Interim Report of the Committee on Currency and the Foreign Exchanges*, p. 5.

died. They were paid out by the Bank of England into the government's currency note account, from which a corresponding quantity of government securities held there was transferred in exchange to the Bank of England. To make our comparison a fair one, we must suppose that this same rule would have held good under the printing press plan. But, if it had held good, that plan, though involving the *creation* of many more notes than the actual plan, would have involved the *survival* of an approximately equal number. The only difference would have been that the balances of bankers at the Bank of England, instead of being created by simple book transfers, would have come into being through the agency of extra notes marked for destruction, which, in their brief span of life, accomplished nothing except to bring those balances into being. The printing press method, combined with the proviso that, in the atmosphere of the Bank of England no currency note can live, is thus, contrary to common opinion, identical in its operation and consequences with the more roundabout policy that was in fact pursued by the British Treasury.

§.9. Let us now, having studied the mechanism, consider the essential character of these methods of war finance. Plainly, the creation of bank credits, whether for the government directly or for private people who have taxes and loan subscriptions to pay to the government, is a mediating, not an ultimate, operation. Its effect is to give the government more purchasing power, and thus to deplete the real value of the purchasing power left to private persons. In this way it enables the government to get possession of more things and services, and so constitutes, as against the public, a concealed form of taxation. This taxation, moreover, is not graduated in any degree and not adjusted in any degree to the size of a man's family. It is simply proportionate to income, without even an allowance to very poor people of a tax-free minimum of subsistence. This kind of taxation is generally acknowledged to be exceedingly oppressive to the poor. But that is not all. Besides drawing too much of what the government needs from the poor as compared with the rich, finance by bank credits also

causes a large transfer of real income from one set of people (mainly the receivers of fixed incomes) to another set of people. This incidental disturbance is similar to the disturbance brought about by protective duties on agricultural produce, which, besides causing the consumers of imported produce to make a payment to the Treasury, also causes the consumers of home produce to make a payment to private persons—ultimately to the owners of agricultural land—at home. Some part of the shifting of distribution can, no doubt, be corrected by adjustment in the rates of payment made for various services. Thus, wage-earners can insist eventually on a rise of money wages more or less conformable to the rise in prices. But everywhere the process of adjustment is bound to involve much friction and some loss of production through industrial disputes; and, for some persons, e.g. debenture-holders as against the holders of ordinary shares, no adjustment is possible. These considerations clearly show that, on the side of distribution, finance by the creation of bank credits is much inferior, not only to ordinary taxes, but even to ordinary loans.

§ 10. It may perhaps be thought that, if, as has just been claimed, finance by bank credits is, in effect, taxation, though of a peculiar kind, it should at least be credited with the superiority which that form of finance was shown in Chapter I. §§ 7-13 to possess over loans as regards immediate depletion of capital and ultimate discouragement of productive energy.

Prima facie it seems clear that any forced levy is likely to be provided to a larger extent by cutting down consumption, and so to a less extent by drawing upon actual and potential capital, than a voluntary loan would be. Moreover, if the levy is made by credit creation at a time when considerable volumes of equipment and labour are standing unemployed, it may call these from idleness to action, and so create, as it were, a new real fund on which drafts can be made. On the other hand, however, if the creation of credit is carried out, not as a single operation, but as a continuing process, so that a strong upward movement of prices is maintained for some time, it may well be that the volume of savings and investment is, on the whole, contracted. For the rise of prices,

by enhancing the money value of their stocks of commodities, causes business men to believe themselves much richer than they really are, and so tempts them into wasteful consumption. For example, if stocks formerly worth £100,000 have risen in value to £200,000, the owner of the stocks may think that he has made £100,000, and, maintaining his stocks at £100,000 worth, may spend the other £100,000, which, though it looks like a profit, is really the fruit of eating up half of his capital stock. Moreover, with a rapidly depreciating currency, members of the general public are discouraged from making fixed interest loans on debentures and so on—the sort of investment which comes easiest to the inexperienced—and may “fly from” currency and investment alike to the purchase of consumable things. It is generally held that the post-war currency *débâcle* in Germany, despite of the gifts that it made to business men, was, on the whole, inimical to saving.

As regards ultimate discouragement to productive energy the case for levies through credit creation is again not strong. Finance by loans, it is true, indirectly involves such discouragement, because loans imply continuing taxes to provide interest and sinking fund later on, while finance by taxation does not. But the paradox of credit creation, at least on the British plan, is that, though, from the point of view of the public, it corresponds to finance by taxation, from the point of view of the government it is, in large part, finance by interest-bearing loans. So far, indeed, as balances for the government at the Bank of England are obtained in direct exchange for currency notes, no interest has to be paid. So far as they are obtained under Ways and Means advances from the Bank of England, interest is paid at a more or less arbitrary rate, which must not exceed 5 per cent. So far as the creation of credits at the Bank of England and their transfer to the balances of other bankers enables these bankers, on the basis of their existing proportion, to increase their loans to government through the purchase of Treasury bills, interest at the current rate for these bills has to be paid. Thus we get three items: balances bought with notes, on which there is no interest; balances obtained by Ways

and Means advances, on which the interest is limited; balances obtained by the sale of Treasury bills—a sale made possible by the creation of a legal tender basis for further bank credits—on which full interest has to be paid. The interest accumulating under the two latter heads accrues to the banking system of the country as a reward for its work in collecting, as it were, a forced levy on the public on behalf of the government. The payment of it necessitates taxation in the future, just as the payment of interest on an ordinary loan does. *Pro tanto*, therefore, it is likely to check, in some degree, the output of industrial energy later on.

§ 11. On the strength of these various considerations it is generally agreed that, though the creation of bank credits may be a convenient means of meeting war requirements at an early stage, before there has been time to organise an adequate scheme of taxation and public loans, yet, even apart from its aftermath of monetary and exchange complications, to which reference will be made in Chapter V., the method is inherently bad, and a government at war should restrict it within the narrowest possible limits. As was indicated, however, in the third section of this chapter, the fear of popular resentment against high taxation in an overt form and the fear that an offer of very high interest for loans will make upon neutrals an impression of financial weakness are likely to compel even strong governments to resort to it in some measure.

CHAPTER IV

GOVERNMENT CONTROL OF FOREIGN TRADE RELATIONS

§ 1. UP to this point very little has been said about international relations. The problems of public finance, other than the several tax problems discussed in Part II. Chapters XVII.-XX., have been tacitly assumed to be, in the main, domestic problems. In normal conditions this assumption is fully warranted. Commerce between the citizens of different countries does, indeed, take place, often on a large scale, and capital for enterprises in one country is sometimes raised in others. Governments, however, do not as a general rule either make purchases or borrow abroad to any large extent, nor do they interfere at all with the financial expression that is given to the industrial and monetary relations of their countries in the rates of exchange between different moneys. In abnormal circumstances, however, such as were exemplified in the Great War and the years immediately following it, the position is different. Government purchases and loans abroad become, or may become, an important part of public finance. The purpose of the present chapter is to examine this matter in a brief and summary way.

§ 2. Prior to 1914 the United Kingdom was accustomed to import large quantities of food and raw material and to pay for them out of her claims for interest upon loans formerly made by her citizens to foreigners and out of the proceeds of the sale of current exports of coal, manufactured articles and shipping and banking services. In these transactions the government had little or no direct concern. During the course of the war there came into existence an enormous new government need for imports of munitions, and our

aggregate need for imports of food, partly on private and partly on government account, rose substantially above what it had been : while, at the same time, the amount of labour and capital available for making exports to pay for these imports diminished. It is true that the gap thus made between our requirements and our means of payment was partly filled by making use of that portion of claims to interest which we were formerly accustomed to devote to new capital investments abroad. But, even so, it was extremely difficult to find means of paying for the enormous extra purchases which we desired to make. This was the position of the United Kingdom during a great part of the war period, and it was also the position of more than one country suffering from grave dearth of food and raw materials for some years afterwards. The fundamental problem was to find some way of financing the importation of vitally necessary foreign supplies. This involved, on the one hand, obtaining command over additional foreign purchasing power, and, on the other, conserving for essential purchases a large part of this purchasing power.

§ 3. In its search for additional foreign purchasing power the government of the United Kingdom was driven, before the entrance of the United States into the war, to a number of expedients, of which the most notable was that of commandeering foreign securities held in England and either selling them in the United States or using them as collateral for raising loans from private persons there. When the United States came into the war, loans of practically unlimited amount from the United States Government became available, and the task of the British Treasury was greatly simplified. Even then, however,—and much more in the earlier and more difficult stage—financial considerations, apart from any others, made it important to insure that the foreign purchasing power available was not frittered away in unessential uses. For any such frittering away involved a corresponding addition to the foreign borrowings of the British Government, and hence to the burden of the external national debt. With other countries the position was similar. Consequently, the period of the war and the

immediately succeeding years afforded many illustrations of attempts on the parts of governments to conserve such foreign purchasing power as they and their citizens succeeded in acquiring for the purchase of essential foreign goods. These attempts proceeded by way of prohibition or restriction of (1) the importation of relatively unessential goods and (2) the investment of capital abroad. The first branch of this policy, which, during the war period itself, the grave shortage of shipping space must have forced us to adopt apart altogether from financial considerations, is comparatively simple. There is, indeed, the difficulty that the first £1000 worth of one thing normally classed as a luxury may really be more urgently needed than the 100th £1000 worth of another thing normally classed as a necessary. This sort of consideration makes it impracticable to draw a sharp line between some things which may, and other things which may not, be imported. But the difficulty can be, and in fact was, got over well enough by a system of licences, under which the importation of different things is limited in different degrees. The second branch of the policy, *i.e.* the prohibition of investment abroad, presents a more complex administrative problem. If the men of money are prepared loyally to support their government, it may be sufficient simply to prohibit the taking up of new foreign issues and the purchase of securities, whether domestic or foreign, from non-resident foreigners. This was all that was done in the United Kingdom during the war. The recent experience of certain European countries has shown, however, that this arrangement is not water-tight. For it does not prevent an exporter of goods or of securities from leaving the proceeds of his sale on deposit in foreign banks, or diverting them to the purchase of foreign capital in foreign markets over which no control can be exercised. Some governments, therefore, have on occasion found it necessary to take a further step. They have made permission to export goods conditional upon the exporter either himself undertaking to use the foreign exchange, to which the exports give him a title, in purchasing goods for importation, or upon his selling the foreign exchange to some form of

official exchange institution, which, in its turn, only sells it to people who wish to pay for imported goods.¹

¹ The reader will have noticed that many of the considerations set out in this and the preceding chapter are relevant to what is sometimes spoken of as the "problem of the foreign exchanges", and may be surprised that no direct reference has been made to that problem. The reason is partly that exchange movements are, in the main, merely symptoms of underlying functional derangements, and, therefore, unimportant to my present study, and partly that I have discussed them at length in the essay entitled "The Foreign Exchanges" in my *Essays in Applied Economics*.

CHAPTER V

THE AFTERMATH OF FINANCE BY BANK CREDITS

§ 1. IF the creation of bank credits is an objectionable method of financing a war, it is an intolerable method of financing the normal processes of peace. So long as it continues, it involves, as has been explained, the levy of concealed taxation proportioned to income, the shifting of wealth from receivers of fixed income to others, and perpetual difficulty in adjusting the wages of workpeople to always rising prices. It involves too, in consonance with the upward movement of prices, a growing depreciation of the exchanges with gold standard countries. Finally, by engendering uncertainty both about future prices and about future rates of exchange, it seriously hampers trade contracts and, through them, industry. If the process of debasement is carried far enough, people will come to distrust the government currency altogether, so that it becomes practically valueless, and the whole industrial life of the country is disarranged. Farmers, for example, not caring to sell wheat for worthless paper, and, not being able easily to barter it directly for goods, will be tempted only to grow enough of it for their own requirements. Other producers will be affected in the same way. There will be government bankruptcy and industrial collapse, and the whole laborious edifice of modern economic life will have to be built up again from the beginning. In the light of these considerations, nobody doubts that, at the earliest possible moment when a war is over, governments should cease financing themselves by further creations of bank credit. No doubt, the calls upon them may be so enormous, as, for example, in Germany

and Austria under the Peace Treaties, that it is politically impossible for any government to maintain itself in power and at the same time either to levy, in an unconcealed form, sufficient taxes, or to raise sufficient loans to enable it both to meet its international obligations and also to pay its way. If this is so, continued finance by bank credits will be unavoidable, in spite of the abyss to which it is sure to lead. This consideration may well suggest the propriety of international action designed to ease the burden of distressed nations ; but it affords no argument against the view that, as soon as possible, every government should cease to resort to credit creations as a source of income.

§ 2. The cessation of credit creations to finance government does not, however, by itself necessarily suffice to stop continued credit expansion. The process of currency depreciation, which finance by bank credits has started, may, unless further remedial steps are taken, continue under its own momentum even after the initiating cause has been shut off. The most prominent source of danger is floating debt in the form, in this country, of Treasury bills. The government may not only have stopped raising new money by bank credits, but may have ceased borrowing altogether and be paying its way out of taxation. Even then it may, on occasions, find itself forced to use credit creation at the Bank of England as the only means of repaying short-time advances, which the public and the banks decline to renew. Thus, if 100 millions of Treasury bills fall due for repayment at any time, and, instead of renewing them, the public put the proceeds of the repaid bills to their deposit credits, or, so far as it is banks that held the bills, if the bankers lend 100 millions more to the public instead of renewing them, the government will be forced to borrow 100 millions on Ways and Means advances from the Bank of England. This means indirectly an increase by 100 millions of bankers' balances at the Bank of England against an unchanged amount of liabilities. The bankers (outside the Bank of England) are, therefore, able, if they choose, without weakening their proportion, to increase their liabilities by no less than 400 millions more, and the doors are open for new credit expan-

sion. The only way in which the government can prevent this is by offering a rate of interest sufficiently high to insure that Treasury bills falling due shall be renewed. Very likely, however, they may hesitate before offering a very high rate for these bills, since this must naturally carry with it very high rates for money generally. Hence, *complete* protection against further credit expansion is not attained until the government, besides stopping new creations to finance new expenditure, has paid off, or funded, floating debt in the form of Treasury bills and any other short-time obligations due from it otherwise than to the Bank of England.¹

§ 3. Even if Treasury bills are funded, or if other means are taken to prevent failure to renew them from enforcing a resort to Ways and Means advances, the position will not yet be entirely stabilised. It is possible for credits to be expanded, not only through an increase in the basis of cash and balances held by the banks at the Bank of England, the banks maintaining their "proportion" at a constant level, but also through an increase on their part in this proportion, *i.e.* through their accepting a larger volume of liabilities on a given basis of cash and balances at the Bank of England. Under the arrangements which prevailed here before the war credit expansion of this kind was held in check by the process described in another connection in Chapter III.

§ 7. In the days immediately following the war, however, both the external and internal drains, of which an account was there given, were blocked up. The external drain was stopped by formal prohibition against the export of gold after the American exchange was unpegged in March 1919. The internal drain was prevented from functioning because

¹ The funding of that portion of the floating debt which consists in Ways and Means advances from the Bank of England may cause a much larger contraction of credit than the funding of Treasury bills. If 50 millions are raised from the public on a long loan and employed to extinguish such advances, the deposits of bankers, and also their balances at the Bank of England, will in the first instance be reduced by 50 millions. In order to maintain their proportion they would need to cut down their loans to the public by no less than 200 millions, *unless the Bank of England was prepared to lend to their late customers*. If, however, it made new loans to these people equal to the 50 millions it had been lending to the government, these 50 millions would come into the balances of the banks, and the basis of the credit structure would be exactly the same as it was before.

bankers, being free to buy currency notes from the government in unlimited quantities in exchange for balances at the Bank of England, were able to satisfy their needs for currency without calling either gold or Bank of England notes from the Bank of England's reserve. If, then, prior to the resumption of free gold export, credit expansions were to be controlled by any outside factor additional to the discretion of the banks themselves, further remedial action was required. This action might take the form either of enforcing, whenever credit showed signs of undue growth, a high Bank rate coupled with whatever action might be required to make the rate effective in the market, in spite of the fact that the Bank of England's reserve position was unaffected, or of prohibiting any further manufacture of fiduciary notes. The former method (high Bank rate) leads indirectly to a stoppage of note manufacture; and the latter method (the stoppage of note manufacture) leads indirectly to high Bank rate. They are really two paths to the same end. If credit expansion is proceeding rapidly, it may be wise to begin operating through Bank rate in a gradual manner, and then to crown the movement by a legal limitation on the note issue. In December 1919 a limit through Treasury Minute—not a formal legal limit—was imposed in the United Kingdom on any further issue of fiduciary currency notes beyond a maximum of 320 millions.

§ 4. A system built on this plan is obviously a mere temporary makeshift. Excessive expansions of credit are guarded against, but there is no provision, such as, within limits, a gold standard provides through the production of new gold, for additions to the currency to balance long-period additions to population and wealth. When the immediate aftermath of the great catastrophe was over, it became necessary, therefore, here as elsewhere, to determine upon a currency system designed to last, not necessarily for ever, but for a considerable period of time. Three principal alternatives offered themselves: (1) to abandon the gold standard altogether and use the occasion to establish a system designed to secure a money stable in terms, not of gold, but of "things in general"; (2) to return to the gold standard at a parity

adapted to the conditions ruling at the time of the return ; and (3) to return to the gold standard at pre-war parity. By the gold standard is meant a system under which there are no restrictions upon the import or export of gold and under which the Central Bank is under obligation to give and accept its notes at their face value against gold bullion, though not necessarily against gold coins for internal circulation.

§ 5. It is no part of the purpose of this book to study the comparative advantages of a money system based upon gold and of one " managed " in the interests of stable internal prices. Some discussion of this matter will be found in my *Industrial Fluctuations*. It is sufficient to say here that, in spite of the strong case that can be made out for one or another type of money in which the value of the currency unit is linked to " commodities in general ", and not to gold, no government has hitherto ventured to adopt any such plan. Since the *débâcle* of the war all governments have professed an intention to return in some form to gold, and many have, in fact, so returned. The practical issue has been, not between gold and something other than gold, but between gold at pre-war parity and gold at a new parity conforming to the new conditions.¹

§ 6. Let us waive for the present the question what precisely the parity conforming to the new conditions is, and postulate only that, for all important European countries, it was, at the close of the war, substantially less than pre-war parity. The considerations that have to be weighed in debating the issue set out above then fall into two groups, concerned respectively with the goal sought and with the process of reaching it. Let us take first the goal sought.

There are three main considerations. First, there is the matter of prestige. It may be argued in favour of a return to pre-war parity that the adoption of any lower parity

¹ Whatever parity is decided upon, choice has, of course, still to be made between three forms of gold standard, i.e. (1) a gold specie standard with free coinage and use of gold coins, as in England before the war ; (2) a gold exchange standard with convertibility into a foreign currency based on gold ; and (3) a gold bullion standard with convertibility into gold bullion at a fixed price, as in England now. (Cf. Hawtrey, *The Gold Standard in Theory and Practice*, pp. 109-110.) This issue is, however, a secondary one.

means deliberate government depreciation of the currency, and so must reduce general confidence in the financial prowess of the devaluating country. Secondly, there are certain considerations of fairness. Changes in the value of gold itself in terms of commodities may, perhaps, be held to be outside the control of individual governments: but these governments are certainly responsible for changes in the value of their money in terms of gold, if before the war their money was based on gold. It may, therefore, be argued that a government adopting a new parity with a lower gold value for its currency than prevailed before the war would be treating unfairly all lenders at fixed interest, whose loans were made prior to the war, or during its earlier stages before the currency had greatly depreciated relatively to gold. On the other side it may be answered that a return to the original parity would be unfair to borrowers at fixed interest who borrowed in the period of depreciation, *provided that they did not allow in the terms of their borrowing for the probability of such a return*. These two species of unfairness have to be balanced one against another—subject to the possibility that mitigating devices of the types to be discussed in § 10 may be introduced. Thirdly, there is to be considered the effect which the choice of a parity will exercise on the budgetary position of the country. If the debt contracted during the war in depreciated currency is very large, and if the depreciation is extensive, a return to pre-war parity might cause the charges for the service of the internal debt to be so large relatively to the money income of the country that it would be politically impracticable to impose taxes adequate to balance the budget.

As regards the process, as distinct from the goal of action, it is evident that for a country with a largely depreciated currency to return to pre-war parity threatens dangers much more serious than would be threatened by the establishment of a parity conforming to current conditions. For return involves a relative fall in internal, as compared with external, prices. Such a relative fall may be induced either by a growth in production in the country in question at a greater rate than in gold-standard countries or by a contraction of credit and

currency at a greater rate. Plainly, very little can be looked for under the former of these two heads, and adjustment must be sought mainly on the side of credit and currency. This does not *necessarily* imply any active steps on the part of the country seeking to return to pre-war parity. If after the war the United States had adopted the policy of expanding her bank credits and increasing her issues of fiduciary notes, Great Britain *might* have attained to pre-war parity by means of a purely passive policy. American circulation of gold substitutes might have caused gold to fall in terms of things as much as sterling had already fallen, with the result that gold and sterling automatically came into line. This kind of *deus ex machina* can, however, in no case be reckoned on with confidence, and, if the road backward to pre-war parity is a long one, cannot even reasonably be hoped for. In the absence of the *deus*, a country wishing to tread the backward path can only do so by bringing about, in one way or another, a contraction in the supply of its own money. This can be accomplished either by forcing currency notes into the Central Bank by high money rates and there transmuting them into government securities, or by buying them for destruction from the public or the banks with balances obtained by taxation—a proceeding which would indirectly compel people to borrow new balances from the Central Bank, and so would force up money rates. The former of these plans has the advantage that under it we know, whereas under the latter plan we do not know, how large the rise in Bank rate is going to be, and so are secure against inadvertently administering a severer shock to business than was intended. But, apart from this, the two plans are essentially one. They are both devices for bringing about a reduction in prices. As such, they must, in some degree, discourage industry; and the discouragement will be increased by friction and disputes when attempts are made to lower wages in correspondence with the price fall. The process to be gone through on the return journey to pre-war parity is not a pleasant one either for employers and holders of ordinary shares in companies, whose dividends—real as well, as nominal—will fall, or for wage-earners, whose employ-

ment will be threatened. The social evils that it involves contribute an important argument against the policy of return to a parity higher than the parity which is natural to the conditions ruling at the time when currency reform is undertaken.

The above various considerations may be expected to balance out differently in different circumstances. Those in favour of a return to pre-war parity will be relatively strong if the gap between that parity and the parity proper to existing conditions is small. For then the damage done to financial prestige by deserting the old parity would be considerable. A government which abandoned it would seem to be debasing its currency, as it were with a light heart; and this would suggest the likelihood of its repeating the process much more strongly than a debasement undertaken under overwhelming pressure. Moreover, the evils of transition involved in a return to pre-war parity will, of course, be less when the road to be traversed is short than when it is long: and—the presumption is—the budgetary difficulties involved in a return will also be less. Again, the considerations in favour of a return to pre-war parity will be relatively strong when the period during which dislocation has ruled has been brief; for, the briefer the period has been, the larger will be the proportion of commercial contracts which were effected in terms of pre-war money. Obviously, if a new parity had ruled in practice for a hundred years, much more unfairness would be involved in going back to the old parity than in accepting the "new" parity. In actual fact, when the war and its immediate aftermath was over, the United Kingdom alone among the European belligerent nations was in a position to attempt a return journey back to pre-war gold with any prospect of success. Actually she did attempt it, and, in 1926, attained her purpose. For France and Italy the difficulties and disadvantages would have been nearly insuperable; for Germany and Austria, when the orgy of credit creation, which took place in the early years of the post-war "peace", had died down, absolutely insuperable.

§ 7. At first sight it might perhaps be thought that, if

the alternative policy of returning to gold at a parity adjusted to current circumstances is adopted, there will be no problem and no difficulty, provided, of course, that the essential preliminary condition of a balanced budget is satisfied. This, however, is not so. For it is highly probable that "current circumstances" will, at any given moment, be out of equilibrium. The internal price level will have risen either too much or too little, relatively to the external price level, to fit in to the rate of exchange. When this is so, should our new parity conform to what the rate of exchange actually is or to what the relative levels of internal and external prices suggest that it ought to, and is tending to, be? Is there a general answer to this question, or does the answer depend on which of the two rival levels is at the time higher? If we elect for what the exchange rate actually is, does this mean what it is on the day of our decision or what it has been on the average of a certain period, and, if so, of what period? If we elect for what the exchange rate "ought to be", by what technique are we to decide between the divergent teaching of different index numbers, and to set down in precise arithmetic what parity is proper to the relative levels of internal and external prices? These questions have large practical importance for countries seeking to restore their currencies to a gold basis at a new parity. They lie, however, far from the central theme of this book and cannot be examined here.¹

§ 8. One further point remains. When, after a currency catastrophe, a new beginning has been made, whether the pre-crisis parity has been restored or a new and lower one established, the movement which has taken place in the value of money is bound to have left behind it many injustices. The question, therefore, arises whether the State, when it again takes firm hold of the monetary machine, should attempt to mitigate these by enforcing a revision of certain contracts. If throughout the period of disturbance the country's money has remained stable in terms of gold—as with the United States during the Great War—it is practically certain that no revision will be attempted, even though the

¹ Cf. Gregory, *The First Year of the Gold Standard*.

value of gold itself may have fluctuated very widely. It is also practically certain that no revision will be attempted if the country's money, having varied from its original parity with gold during the crisis, has at the end been brought back to this parity; for the mere fact that a return to pre-crisis parity has been found possible of itself implies that the lapse from it was not extremely great. We may, therefore, confine our discussion to countries whose money it is found necessary to devalue in terms of gold.

I am here using the term "devalue" with a significance perhaps somewhat wider than is common. When a paper money has greatly depreciated from its pre-crisis value, it is possible to bind it again to gold in three ways. First, the paper £s in existence—I take £s for convenience of illustration—may be continued as £s sterling, and it may be decreed that a £ sterling henceforward shall be convertible into $\frac{1}{100}$ th part as much gold as before. This is devaluation in the ordinary sense. It carries with it the implication that, unless some special law is passed to the contrary, all contracts which have been made in terms of £s sterling must be discharged in £s sterling of this reduced gold value. The recent French and Italian devaluations were of this type. Secondly, the paper £s in existence may be "demonetised"; the name sterling, which is taken away from them, may be allotted to a new money, having the same gold value as the original £ sterling; and it may be decreed that all paper £s in existence are henceforward convertible into $\frac{1}{100}$ th parts of this new £ sterling. The German devaluation illustrates this type. Thirdly, a new monetary unit may be created, e.g. the Austrian schilling, with a defined value in gold and exchangeable against such and such a quantity of the old money, roughly adjusted to its current gold value. Under both these two last kinds of devaluation the holders of the depreciated money are in the same position as under the first kind. But, wherever the name of the old standard is retained and transferred to a new unit, parties to existing contracts are *prima facie* in a different position; because, unless a law is passed to the contrary, it would seem that contracts which were made

in units of that name must be discharged in such units, *i.e.* by delivery of their original gold value. In the most important case of this type of devaluation, however, namely that of Germany, the old marks and contracts in terms of these marks were put by the law on a common footing in relation to the new stabilised mark. Thus, in all the post-war devaluations, whatever their detailed form, contracts in terms of the old money have in fact been devaluated along with the money itself.

Where one person has lent money to another at a time when the real value of that money was high, but receives interest or a return of the principal of his debt in a devaluated form, he has clearly suffered a grievance. Exactly how serious his grievance is cannot be determined unless we know how far the monetary collapse was anticipated, and so discounted in the terms of his contract. But, with catastrophic collapses, it is certain that, before the crisis began and in its earlier stages, the event will scarcely have been discounted at all, and even in the later stages it is very unlikely to have been discounted adequately. Therefore, it would seem proper, if the practical difficulties could be overcome, to provide for a writing-up of contract debts adjusted in some degree to what the value of money was at the time when they were made. The "value" of money for that purpose should, theoretically, be its value in terms of commodities, and not of gold, if, over the period covered, these two values have moved widely apart. But, since, at the best, only a very rough mitigation of grievances can be hoped for, refined considerations of this class may be left out of account. Moreover, it has to be remembered that, after a currency crisis, there will be outstanding, not only a large mass of contracts between individuals, but also a large mass of debts in the form of currency owing to individuals by the government. Since one of the main reasons for devaluation may well be that the government would be unable to balance its budget if these debts—or the interest upon them—were to be paid in money of the value that ruled when they were incurred, it is not to be expected that any law for revising contracts will write-up debts from the government in a ratio equivalent to

the devaluation which has occurred: and it is difficult to defend a policy which would write-up debts due from private persons further than debts due from the government. Hence a partial writing-up of debts to mitigate, and not to remove, the injury which devaluation has caused to creditors is the utmost that anybody can hope for. In Germany recent legislation granted to creditors for private debts, *e.g.* bondholders of companies, who bought their bonds prior to July 1, 1920, a valorisation up to 25 per cent of the original gold value at the time of purchase, and to holders, who bought after July 1, 1920, and who, therefore, it is presumed, bought speculatively, up to 15 per cent. In view of the difficult position of the State finances creditors of the government who bought government bonds prior to July 1920 were granted a valorisation of only 12½ per cent, new bondholders apparently being granted nothing. Moreover, certain classes of contracts, which had already been settled in depreciated money, were reopened in the interest of the creditors. Thus mortgages, which had been paid off between January 1, 1922, and the introduction of the new law, were revised and revalued up to 25 per cent of their original gold value. Plainly, however, a policy of this kind cannot be carried far. To reopen on a large scale transactions which have been closed, and on the strength of whose closing new contracts, it may well be, have been made, would throw industry into chaos, and could not be attempted with any prospect of success.¹

¹ Cf. Hargreaves, *Restoring Currency Standards*, pp. 97-98.

CHAPTER VI

INTERNAL WAR DEBT AND A SPECIAL LEVY

§ 1. In the rush and difficulty of a modern war statesmen are certain, for political reasons, to rely predominantly upon some form of borrowing—we need not now distinguish between normal loans and loans through bank credits—rather than upon taxation. This was the course followed in every country—even in the United States of America—during the Great War. It is a course that leaves as its aftermath a very difficult financial problem. When a country has a large internally held national debt there are four lines of action open to it: (1) repudiation; (2) provision for the service of the debt by currency expansion; (3) a large special levy; (4) provision for the service of the debt out of annual taxes. When, for any reason, political or other, method (4) is excluded and the choice is between the other three, the case ^{for} a special levy is enormously stronger than it is when method (4) is not excluded. In England method (4) is actually at work, which proves it to be feasible, and, therefore, the case for and against a special levy stands on a different plane from what it would occupy if our national debt were, say, two or three times as large as it is. I shall postulate a situation of this kind, where repudiation and finance by currency expansion are both ruled out, and the choice lies between quick repayment of large masses of debt by a special levy and the service of debt out of taxes over a long series of years. I assume that, whichever plan is adopted, the intention will be to distribute the burden among people of different degrees of wealth in a roughly similar manner.

§ 2. To give concreteness to my discussion I shall relate it to the actual debt of the United Kingdom. Foreign debt, the service of which *may* perhaps be nearly provided for out of payments to us in respect of our own claims on foreign governments, I shall leave out of account. As a convenient round figure, we may put the effective debt of Great Britain and Northern Ireland at some £6000 million, all held internally. With a debt of this magnitude at $4\frac{3}{4}$ per cent, so long as none of the principal is repaid, £285 million would have to be raised every year to provide the interest. (Nobody proposes, however, that the principal shall be left outstanding as a debt for ever. A large national debt weakens the financial position of a State and makes it difficult for it to raise money to meet any emergency with which it may be confronted. Consequently, it has always been the policy of prudent governments in time of peace steadily to reduce debt. When the British debt, in the years before the war, stood at the comparatively low figure of £700 million, there was no dispute about this. Every year more revenue was raised than was needed for current expenditure and the payment of debt interest, and the balance was devoted, through the agency of a sinking fund, to reducing the principal of the debt. It is agreed that a policy at least as strict as this must be followed now.) In addition to revenue for interest payment further revenue must be raised for the repayment of principal. This means that at first we shall require, say, 310 millions annually, and then, as the debt is gradually paid off, a smaller annual amount. That is "orthodox" financial policy. In contrast with it stands the rival policy of a large immediate special levy to redeem debt. That policy agrees with orthodox policy in refusing to allow the principal of the debt to remain outstanding permanently. It differs from it only as regards the period over which repayment should be spread. Whereas orthodox policy would repay a small fraction of the principal debt every year and would complete repayment in a period of fifty or a hundred years, the policy of a special levy would repay a very large fraction of the principal—if it were practicable, it would repay the whole—by a single tremendous effort. This is the fundamental issue, to which

all questions of the form and method of a special levy, if it is decided to make one, are subordinate.) Is it, on the whole, more to the national advantage to discharge a great slice of debt by a single levy at once, and so to do away with the obligation to pay interest on it in the future, or to repay the debt gradually and face large interest charges for a long term of years? (This issue it is the business of the present chapter to examine. I shall arrange my discussion in three parts: I shall study first the effect of a special levy policy without reference either to equity or to administrative technique; secondly, distributive fairness by itself; thirdly, technique by itself.)

§ 3. Before this programme is attacked, however, it is desirable to clear out of the way a popular argument which rests on misunderstanding. The problem to be faced, it is said, has an exact analogy in individual life. A man in debt to the extent of £6000 borrowed at $4\frac{3}{4}$ per cent has to choose between paying interest and reducing the principal of his debt slowly—orthodox finance—and paying off the whole debt at once—the policy of the special levy. It is impossible to decide which of these two courses would be more advantageous in any general or absolute sense. The right choice depends on the circumstances of the debtor. If, however, he has contracted the debt in resisting an attack by a powerful neighbour, and if, in the course of the contest, his resources have been strained to breaking-point, the issue is not doubtful. He *must* repay gradually, for the simple reason that he *cannot* repay at once. The United Kingdom, the argument runs, is in exactly this position. Impoverished as we are by the losses of the war and its aftermath, the enormous payments, which a special levy would involve, are wholly beyond our means. This analogy, plausible as it sounds, misses a vital distinction. Whereas the individual we have been imagining owes the whole of his debt to other people, the British nation owes the predominant part to itself. So far, no doubt, as it is indebted to foreigners, its position is analogous to that of an individual debtor. But, so far as it is indebted to British citizens—and it is this aspect of the debt with which we are here concerned—its position is quite

different. To repay debt of this kind involves no drain on the resources of the community as a whole, because, though one part of the community transfers resources to another part, the community as a whole pays nothing. It follows that, whereas the impoverishment of an individual may make it impossible for him to pay off the principal of a debt due from him, and the impoverishment of a community may have the same effect on it so far as its debt is held by foreigners, this impoverishment cannot make impossible the repayment by the community of a debt held by its own members. This becomes obvious when we reflect that the community can, if it chooses, impose on each of its members a levy exactly equivalent to that member's holding of State debt. Thus, the analogy between internally held national debt and debt due from individuals is not a valid one.

§ 4. Let us then consider the effects that may be expected from the imposition of a special levy to take over part of the tasks of orthodox debt finance. Along the lines of the analysis developed in Part II. it is easy to see that, distributional considerations and difficulties of technique being ignored, the raising of revenue coupled with its expenditure in debt repayment implies some net sacrifice. For, apart from lump-sum taxation, which we saw not to be feasible on any important scale, all tax announcements—where the revenue raised is retransferred in discharging internal debt—reduce the supply of work, and so check production; ¹ whence it follows that the damage done by raising a revenue R , expressed in money, must be greater than R . If the rates of taxation in a given country are high, not only absolutely, but also relatively to those ruling in other countries, the damage will be intensified by a tendency on the part of some rich people to take themselves and their capital abroad. When to income tax and death duties are added various sorts of commodity taxes, there will follow, besides a diminution in the quantity of productive effort, a disturbance in its direction—a diversion of resources from the sorts of production that people would favour if left to themselves—and, therewith, in general, a further element of real loss. It

¹ Cf. *ante*, Part II. Chap. V. § 2.

follows that, whatever the amount of the internal debt, some advantage to national well-being will follow if it can be eliminated by a process which does not itself involve a real cost. There is a further presumption that the advantage of eliminating a large internal debt would be more than proportionately greater than that of eliminating a small one; because, while a certain amount of money can be raised by taxation of a kind and degree that is only slightly obstructive, as more and more money is required, resort must be had to worse and worse kinds of taxation and to more and more oppressive rates. There can, therefore, be no reasonable doubt that the elimination, by some costless process which did not modify distribution, of, say, £3000 million of the existing internal debt of Great Britain would increase our national well-being.

§ 5. This merely qualitative result is, however, of little help as a guide to policy. The process of elimination would not in fact be costless, and we need, therefore, before we can decide whether it is worth attempting, to form at least a rough idea of the scale of the gain which might be looked for. Now, if the contention of Chapter V. § 7 of Part II., to the effect that the supply of work is in general fairly rigid, be accepted, it will follow that large sums can be raised by direct taxation for the service of internal debt with very much less damage to work and enterprise, and so to economic welfare, than is implied in the conventional complaints of business men about the oppressive effects of such taxation upon industry. In the matter of saving it is even arguable that the net effect of debt service transfers—presumed to include some annual repayment of principal—will, when distributional as well as announcement effects are taken into account, be favourable rather than the reverse, since the repaid principal will almost certainly be devoted to new investment, while the funds to make repayment will be provided at least in part by economies in consumption.¹ Hence, even though the repayment of £3000 million of internal debt, implying the remission of some £150 million of annual revenue now required for the service of it, *i.e.* half of the present yield of our income tax

¹ Cf. *ante*, Part II, Chap. IV. § 10 footnote.

and super-tax, enabled us to cut down rates of income tax and super-tax by a half, the net benefit would be on a very much smaller scale than is popularly supposed. High rates of direct taxation—when the proceeds are retained inside the country—are not really very damaging, and even a substantial cut in them is not, therefore, very beneficial.

§ 6. There is also a further important consideration. To remove by repayment of internal debt the need for revenue equal to half the yield of our present income tax and super-tax would not enable us to reduce the rates of these taxes in anything approaching that proportion: and a like proposition holds good of death duties. The reason is that, under British methods of assessment, interest on war loan is assessable to income tax and war loan holdings to death duties; so that repayment of internal debt, by wiping out this income and associated capital, would reduce correspondingly the amount of income and of capital in respect of which income tax and death duties are subsequently levied. *Prima facie*, indeed, this consideration only suggests that the cut in tax rates made possible by the repayment of internal debt through a special levy would be a little smaller proportionately than the cut in revenue requirements. This suggestion is, however, a grave understatement. It ignores the fact that, since any special levy for debt repayment is certain in practice to be steeply graduated, the assessable income and capital destroyed by it would, in the main, consist of income and capital subject to high rates of super-tax and death duties. This matter has been studied in detail by Sir Josiah Stamp. Writing in 1923, and basing himself on a levy of £3000 millions scaled in the way proposed by the Labour Party, he concluded, as the result of a careful and detailed study: "For some time to come, the total annual loss of duties would be in the neighbourhood of £90 million to £98 million, and, as the saving in revenue (consequent upon debt repayment) was put at about £140 million, the net gain lies between £42 and £50 millions. In other words, approximately two-thirds of the levy is wanted to 'pay its own keep'";¹ and its effect in enabling rates of taxation in

¹ *Current Problems in Finance and Government*, p. 265.

the future to be reduced is only one-third of what it seemed likely to be at first sight. The income tax could not, in short, in consequence of a £3000 million levy, be reduced by more than 1s. in the £. A more recent calculation, carried out by the Board of Inland Revenue for the Committee on the National Debt and Taxation, is in close agreement, allowing for changes in the rates of taxation as between the dates of the two estimates, with that of Sir Josiah Stamp.¹

§ 7. Even this, however, is not all. The aforesaid £50 million of budget savings can only be regarded as net savings on the assumption that, were methods of orthodox finance to be continued instead of a special levy, the burden of the debt, allowance being made for its gradual repayment under a sinking fund, would remain what it is now. If there is reason to believe that, under orthodox methods, relief would soon be forthcoming to the extent of, say, 5d. in the £ on income tax, the net benefit to be assigned to a special levy policy is represented by a reduction in income tax per £, not of a shilling, but of something intermediate between a shilling and 7d. Hence, it is important to inquire whether in fact, under orthodox finance, any substantial relief is to be looked for. Under this head three principal factors call for study.

First, it is often urged that, as the world in general, and this country in particular, recover from the effects of the war, the rate of interest at which it is possible to borrow money will fall: that, therefore, the government may hope to effect a conversion of its long-term debt, replacing, perhaps, 5 per cent obligations by obligations of $4\frac{1}{2}$ per cent or even 4 per cent. In so far as it succeeds in doing this, the amount of revenue, which will be needed to provide interest on any given amount of war debt, will be proportionately reduced, and, consequently, less high rates of taxation will suffice. This consideration is obviously relevant. But it is very difficult to determine how important it is quantitatively. A 1 per cent cut in interest rates would represent a gross saving of some £50 million a year, or a shilling off the income tax. In view of the long-dating of most government borrowing,

¹ Cf. *Report of the Committee on National Debt and Taxation*, p. 254.

and of the fact that conversions, no less than a special levy, commit ravages on the future yield of any given rate of income tax, it is certain that no saving on that scale would be possible even after the lapse of a long term of years. In the course of the next decade it would be unreasonable to look to a saving from true conversions—conversions which purchase a reduction of present interest merely by the offer of higher ultimate capital payments are not true conversions—of more than a few million £s annually.¹

Secondly, in spite of the prolonged period of post-war difficulty, there is ground for hope that the productive power of this country will continue to increase in the future as it has done in the past. Increased productivity will involve increased incomes, and so, it is argued, will make it possible to raise the same revenue as now by means of much lower rates of taxation. There is in this contention an important element of truth; but some qualification is necessary. Plainly, if our national debt were contracted in terms of commodities, an increase—to take an extreme case, a doubling—of the productivity of the United Kingdom *must* make it easier to budget for the annual debt charges. Whereas, before the improvement, these charges absorbed, say, one-twelfth part of the real income of the people, after it they might absorb, say, one twenty-fourth part; and the rates of taxation associated with them might be roughly halved. But the national debt is contracted in terms, not of commodities, but of money. This complicates the issue. If increased production has no effect in reducing prices, money incomes will increase in the same proportion as production increases, and the rates of taxation needed to yield a given revenue will be diminished to exactly the same extent as they would be under a system of payment in kind. In fact, however, an increase of production tends, other things being equal, to cause a fall in prices, and if, as is to be expected,

¹ The Committee on National Debt and Taxation (Majority Report), after a careful study of the position, conclude: "We are of opinion that the review we have made of the possibilities of savings from conversions does not justify the placing of any great reliance upon such operations as a means of effecting a really appreciable mitigation in the early future" (p. 67).

the increase is not confined to this country, but is world-wide, a very considerable fall. But, when prices fall, a given volume of production is represented by a smaller money income. If, for example, production doubles, but at the same time prices fall by a quarter, the sum of real incomes will be doubled, but the sum of money incomes will only be increased to one and a half times the former amount. This does not prevent the increased productivity from having its full effect in lowering the rates of taxation needed to finance *normal government expenditure*, because a government, which still wishes to buy the same quantity of things and services as before, will now require only three-quarters as much money revenue. But the position is different as regards *government expenditure on debt charges*. The money revenue needed to meet these is the same as it was before. Real incomes all round have been doubled, but money incomes have only increased in the proportion of 3 to 2. Consequently, the rates of taxation required to finance war debt will not be halved, but only reduced in this latter proportion. It should be added that an increase in productivity up to double its existing amount in any short period would be a very exceptional occurrence, for it appears that in recent times the average increase has been about 3 per cent per annum.

There remains a third consideration pointing in a sense opposite to the above. As a consequence of the war, the value of gold in terms of things has greatly fallen throughout the world; in other words, gold prices have everywhere greatly risen. It may be that in future years gold prices, which are, of course, now equivalent to sterling prices, will, through the operation of causes acting on the side of currency, move, by slow degrees, nearer to the pre-war level than, on the average of slumps and booms, they stand now. If a fall of prices due to currency causes comes about, the money incomes, representing given real incomes, of the people must fall correspondingly. Hence, in order to raise a given money revenue to meet debt charges, the government will have to impose rates of taxation higher—perhaps much higher—than are required now. The heart of the matter can be set out in a crude statement thus: if prices are halved through

currency causes, the tax-payers will have to pay to fund-holders the equivalent of twice as many things as they have to pay now: fund-holders will gain and tax-rates will increase to exactly the same extent as they would have done if prices had remained constant and all war obligations had been doubled in amount. The imposition now of a special levy to wipe out debt would obviate this danger. If general prices are due to fall seriously, this is a very important matter. The future of prices cannot, however, be forecast with any confidence. The Committee on National Debt and Taxation conclude: "We think that the evidence is sufficient to indicate that present conditions do not point to any very strong or definite movement in general prices, such as would be required to affect in any important degree the case for or against a capital levy".¹ Even this guarded statement is, perhaps, over-confident.

It is plainly impossible to measure statistically the three factors considered in the preceding paragraphs. They are all exceedingly uncertain. *Probably*, however, no one of them is of large significance. It, therefore, seems a reasonable, as it is, beyond doubt, the only practicable policy to set them off against one another, in effect assuming, in the absence of knowledge, that they roughly balance. If we do this, we shall conclude, on the basis of Sir Josiah Stamp's analysis, as set out in § 6, that the real effect of wiping out £3000 million of internal debt would be to allow of a cut of about 1s. in the £ off income tax or some equivalent cut off other taxes, and so to increase economic welfare to the small extent which we were led to contemplate prior to the analysis of the present section.

✓ § 8. Against this benefit from the *consequences* of a special levy there have to be set any ill effects that may be attributable to the levy itself. It is sometimes argued that, since a single levy to wipe out debt must be enormously larger than the contribution of any single year under the orthodox system, the greater size of the levy would cancel the benefit of its less frequent imposition. This contention is, as it stands, invalid. A special levy to wipe out debt must be

¹ *Report*, p. 258.

assessed on the basis of existing facts, on the capital that people have now, or on the income that they have now, or, at all events, by reference to some objective criterion that is known now. Consequently, whatever different individuals have to pay—it does not matter whether they have to pay at once or are allowed to pay in instalments—is fixed independently of their future conduct. Thus, a special levy of, say, 200 per cent of a man's current income is roughly equivalent in yield to a permanent income tax of 10 per cent. But, whereas the permanent 10 per cent tax implies that one-tenth of whatever he may get in the future by work or saving will be taken by the government, under the 200 per cent single levy, he will have to pay a definite amount, fixed once and for all; and, however much he may increase his income in the future, he will not have to pay anything more. Unless, therefore, people are afraid of further levies, the levy plan cannot do damage in the way contemplated. It may, indeed, be answered that the imposition of a large special levy for the purpose of paying off debt will create an expectation that it will be repeated, not merely to wipe off any debt that the first levy may have left standing, but also, it may be, for purposes not connected with debt redemption at all. This expectation will discourage people from saving and so adding to the capital stock of the country, and this check to capital will react injuriously on productivity. The injury wrought in this way will, it is urged, be very great. It cannot, moreover, be prevented by any assurance of the Cabinet, or even of Parliament, that a repetition of the levy is not contemplated, because no government can effectively bind its successors. There is force in this argument. But it is open to a rejoinder. If and so long as a "capital levy" forms a plank in the programme of an important political party, the fear that a levy will be imposed exists already. It is even arguable that, when once a levy had actually been made, people would feel that things were settled, at all events for a considerable time, and would, therefore, be actually less fearful of the future than they are now. This objection to a special levy is not, therefore, very formidable.

§ 9. A second line of argument sometimes adopted is as

follows. Hitherto, we have proceeded on the tacit assumption that government policy as to expenditure in the future would not be altered as an indirect consequence of repaying internal debt through a special levy. It may be urged that in fact policy ^{as to expenditure} will be altered—and that in an injurious manner. When the annual revenue needed to provide interest and sinking fund on the debt has been reduced, the result will be, not lessened taxation, but increased extravagance on the part of the government. Having found that it is possible to maintain, for example, an income tax at a standard rate of 4s. in the £, the government will merely use the saving on debt service as an excuse for more spending; so that in the end, instead of the levy being a substitute for high annual taxes, it will turn out to have been an addition to them! This argument is, from a practical standpoint, a very important one. There can be no doubt that, when so large an amount of revenue has to be raised that the tax system is strained, this fact strengthens the hands of the opponents of public wastefulness. The argument that “the country cannot afford unnecessary officials”, and so forth, has a greater backing of votes when the budget is 800 millions than when it is 200 millions. It is true that against this must be set the attitude of mind of the spending departments themselves. With a budget of 1000 millions, such a sum as, say, 10 millions seems a bagatelle, whereas, with a 200 million budget, it is a grave matter. This consideration is, however, outweighed by that just set out. To wipe out £3000 million of internal debt would certainly, on the whole, weaken the country's defence against government extravagance. This, however, is not the complete case. Not all sorts of government expenditure are waste. A government may easily be accused of extravagance because it has increased its expenditure on educational services, the payment of old age pensions, or other socially ameliorative enterprises. The cry, “We cannot afford this”, may, in short, be directed against good things as well as against bad. It may even happen that it is more effective against the good things: that the Treasury, for example, has greater success in vetoing a 10 million increase in educational charges than in clipping, to the extent

of 10 millions, the wings of some unduly grandiose ministerial establishment. This is a real danger. There are, of course, limits to the extent to which it is for the national advantage for the government to spend money on social betterment. But the limits are chiefly, though not entirely, dependent on the proportion between the real income of the country and the real—using-up—expenditure which it undertakes through the agency of the government. So far as the budget is swollen by charges connected with internal debt, budget expenditure does not correspond to this real expenditure, because, as has been urged many times in this volume, money raised to meet these charges is not spent in any ordinary sense, but is merely transferred from one group of citizens to another. This fact not being generally realised, there is a presumption that the existence of large transfer expenditure to finance internal debt will cause expenditure on social betterment to be checked more than it ought to be. Hence, if it should happen that new government expenditure is undertaken in consequence of the relief to the budget brought about by debt repayment, it is gratuitous to assume that it will all be mere waste. Some of it, at least, is likely to be expenditure which ought to be undertaken, but has not been undertaken hitherto because of the technical difficulty of enlarging an already enormous budget, coupled with the inability of the public to understand the distinction between taxation for real expenditure and taxation for interest on internal debt. It is true that good government expenditure, equally with bad, involves a forcing up of tax rates. But, since good expenditure is, almost by definition, expenditure the advantage of which is greater than the disadvantage involved in raising the money for it, this increase of rates cannot be taken to cancel the original lowering of the rates for which a levy is responsible. The whole of that lowering must be counted to the levy for righteousness, even though the country decides, after the lowering has been accomplished, to put rates up again in a cause that it considers worth the damage to production that high rates involve. The case for keeping debt unrepaid, as a means of dragooning spendthrift governments, is thus not made out.

§ 10. A further objection to the device of a special levy is based on the dislocating effects likely to be produced by the actual process of collecting the very large sum that the levy contemplates. Upon this matter there has been considerable misapprehension. It has been asserted, for example, that any levy plan necessarily involves withdrawing an enormous amount of capital from industry, thus robbing it of its means of life. This is not so. Industrial capital consists of factories, machines, materials, and the stores of goods out of which real wages come. None of these are withdrawn from industry by a special levy. The utmost that can happen is that so much purchasing power is taken by the government from one set of people (the payers of the levy) and handed over to another set of people (holders of war loan) inside the same country. This has no direct effect on the supply of capital to industry as a whole. So much being granted, it is next argued that working capital would, nevertheless, have to be withdrawn in large masses from particular industrial concerns, that this capital would probably not be immediately replaced, and that, therefore, many concerns might be forced to close down. This argument is more substantial than the other. It points to a real difficulty. But the difficulty is much smaller than the argument suggests. The reason is that the main part of industry, in this country at all events, is in the hands of public companies, and that these companies, not being subject to the levy (though, of course, their shareholders are subject to it), cannot suffer any withdrawal of capital. There remain private concerns. So far as the owners of these possess resources outside their business—war stock, for example, that is not serving as security for loans—sufficient to meet the levy upon them, their business need not suffer. On the strength of an *ad hoc* investigation made for them by the Board of Trade, the Committee on National Debt and Taxation write: "It seems safe to conclude that, in the case of private trading concerns (including private limited companies), the assets which proprietors could pledge for bank advances are, in the aggregate, far in excess of those actually so employed".¹ None the less, there

¹ Report, p. 271.

must, of course, be a number of firms practically the whole of whose resources are locked up in their business, either directly or as collateral for loans. If such firms had to meet a large levy all at once, they might be broken, and their business largely destroyed. For such firms it would be necessary to make special provision. This could be done by permitting the Treasury, when good cause was shown, to accept payment (with interest) in instalments spread over a definite number of years. There is no reason, and, indeed, it would be very undesirable, that this method of payment should become the normal one. But it might appropriately be used for the relief of hard cases. In like manner, for imposts, if any such were included in the special levy, upon professional men and others whose wealth consisted of the immaterial capital of personal qualities, the government would, no doubt, have to be content with a series of annual payments rather than with a large lump sum. With reasonable arrangements on these lines there is little danger that a special levy would damage any concerns by withdrawing real capital from them. ✓

✓ § 11. There remains the argument that, even though a special levy would not injure industry directly through real capital, it would injure it indirectly through finance. In order to raise the money to pay their quotas, people, it is said, would be compelled to throw securities on the market to such an extent as to cause a serious fall in values, and the ensuing slump would dislocate arrangements for loans on collateral, with inevitable repercussions upon industry. This argument rests, in part at least, on a misconception. Even though the levy had all to be paid in actual cash, since the proceeds would be employed in paying off holders of war loan, these people would presumably have about as much money seeking securities as the payers of the levy had securities seeking money. Any momentary gap between the time of the levy and the time of using it to buy war loan could easily be adjusted through the banks. There is, therefore, no reason to fear anything like a general slump in values, though, of course, some particular securities might suffer somewhat relatively to others. But this is not the whole matter. There would be no need to require payment of the

levy in cash. Payment in war loan stock would be even more acceptable to the Treasury, and payment in other first-class securities not less acceptable. Arrangements might also be made, as under the German Capital Levy law, by means of a specially created institution for holding property on behalf of the State, to permit people who so desired to pay in other less readily marketable securities, or even in some forms of real property. Thus, no serious difficulty and no appreciable injury to industry through repercussions from finance need arise. It must be confessed, however, that a successful propaganda of misunderstanding, or hostility on the part of bankers, might easily bring about a financial panic, and so, for a time, general disorganisation. I conclude, therefore, that *in a favourable atmosphere* the damage attributable to the actual process of collecting a special levy would be small; there would be nothing of significance to set on the debit side against the benefits associated with the shilling cut in income tax which a £3000 million levy would render possible. If, however, a special levy were imposed in an unfavourable atmosphere, the damage done by the process of collecting it might be very large, and would very probably outweigh the whole of the advantages looked for from it.

§ 12. I now turn to the second part of my problem as distinguished in § 2, namely, the merits or otherwise of a special levy, as compared with orthodox finance, from the point of view of equity. We are supposing, it will be remembered, that the general scheme of distribution as between people of different grades of wealth is to be as nearly as possible the same under both plans. The essential fact is that a special levy takes from a number of people a large sum at one blow instead of a succession of smaller sums over a period of years, the lump sum method striking them over this period of years by depriving them beforehand of property which would otherwise have yielded them income. Thus, whereas with orthodox finance the burden imposed on different people is adjusted to their capacity in each year as it comes, under the special levy method the distribution of it is determined once for all at the beginning of the period, without regard to any changes in fortune that different people may subse-

quently undergo. If equal intelligence is applied to devising a plan for a special levy and a plan for continuing taxes respectively, it is inevitable, therefore, that the special levy plan should work out less fairly than the other. Thus, while, of course, it is as easy to graduate a special levy as to graduate an income tax, it is impossible to take adequate cognisance under it of family needs. Under an income tax a bachelor, a father of five living children and a father of five children who have died are appropriately treated both in each several year and over the whole period of their lives. Under a special levy two men who are bachelors at the moment the levy is made must be treated alike, although during the period covered by the effects of it one may continue a bachelor and the other may become possessed of an enormous family. This inequality of treatment occurs equally whether we include or do not include allowances for children in the structure of the special levy law. Allowances, if made, can only take account of a man's family as it stands at the moment of the levy, not of what it is going presently to become. In like manner, whereas under income tax a man who comes into a piece of good fortune is taxed in consequence of it, under a special levy, if that good fortune occurs immediately after the levy law has been framed, he is necessarily treated in the same way as the man to whom no corresponding good fortune comes at all. Distributional errors of this type are inevitable under a special levy, whatever basis of assessment is chosen for it.

§ 13. Again, under the only form of special levy which has hitherto been widely advocated, namely a levy assessed upon material capital, there is a serious inequity as between owners of this capital and owners of the immaterial capital of large personal earning power. Since a special levy for debt repayment is a substitute for future taxation to provide for debt service, it is plainly proper that those who have the power to earn income, since they will benefit from the reduction of future taxation, should bear a share of the levy. Unless they are made to do this, the imposition of the levy will have the effect of substantially altering the burden borne by different citizens, to the advantage of those possessing

the immaterial capital of capacity to do profitable work and to the disadvantage of those possessing material capital as ordinarily understood.¹ This shifting of burden is exactly similar to that which would occur if the policy of a levy were rejected in favour of the orthodox system of annual taxation, but the rates on investment income were largely raised, and those on earned income largely reduced. Of course, it is open to any one to maintain that the existing discrimination between the rates of income tax on the two sorts of income is less favourable to earned income, even when account is taken of death duties, than it ought to be. But, if this be so, the right policy is to readjust relative rates in whatever manner is thought proper: nobody can believe that the right adjustment would be attained through a levy, of arbitrarily determined magnitude, confined to material capital. (It is, indeed, not difficult to imagine a form of special levy which should be based both on material capital and also on the immaterial capital of trained earning power. It would, however, be unreasonable to require the revenue officials to value for assessment such an entity as immaterial capital.) The present worth of a man's capacity to earn so much income depends on the man's expectation of life, and so would be different for men in similar occupations but of different ages. Account would have to be taken too of prospects of promotion; and, in strictness, not merely of existing capacity, but also of capacity to acquire capacity. Clearly, this is impracticable. A second-best solution would be provided by a levy on capital coupled with a special tax upon earned income; or, what comes to the same thing, followed by a reduction in the taxation of investment income but not in that of earned income. This arrangement, however, is not one that a democracy, interested to *relieve* earned income at the expense of investment income, is at all likely to adopt. Hence, a special levy, which in the nature of things must be somewhat less fair than continuing taxation, is likely in practice to prove *much* less fair.

§ 14. The third and last division of my subject-matter concerns administrative technique. It may be laid down at the outset that any levy law is practically bound to prove

unworkable if introduced during a period of violent fluctuations in the value of money ; for such fluctuations will upset the whole intention of the law in the interval between its passage and its application. We assume then reasonably stable monetary conditions. On that assumption, the technical problem to be tackled depends on the particular form of special levy that is chosen. The main difficulty presented by a capital levy in the ordinary sense, whether standing alone or coupled with special imposts upon earned incomes, is the need under it for a large-scale valuation of capital wealth. The hardest problem arises in connection with life interests, which, according to Sir Josiah Stamp's estimate, affect somewhere between 15 and 20 per cent of the wealth that would come under the levy.¹ Since the capital value of these can only be calculated by reference to the actuarially probable length of the life-tenant's life, the valuations must necessarily turn out wrong in the great majority of individual cases.) "The life-tenant A has a valuation of £70,000 on his expectation of life, say, 17 years, and has other property £30,000. Assume that he pays £35,000, the bulk of which he raises by mortgaging his whole independent property. He dies the following year, and, instead of being worth £30,000, his estate is wholly bankrupt and his dependents penniless. B's reversion is valued at the residual £30,000, on which he pays, say, £5000. The following year he comes into the full interest and has really been undercharged by a very large sum."² Even here, however, there is a way round. In a note prepared for the Committee on National Debt and Taxation the Board of Inland Revenue write : "An alternative course would be for the levy to be imposed, not on the separate interests of individuals and payable out of their estates, but on the whole value of settled property and payable out of the settled fund, the rate of duty both for the settled fund and for the free wealth of the life-tenant being found by aggregating the value of the settled property with the life-tenant's other property."³ This way of treating the settled property would agree with that now

¹ Cf. *Current Problems in Finance and Government*, p. 232.

² *Ibid.* p. 231.

³ *Report*, p. 249.

in force for the Estate Duties, and so would introduce no new principle. Where no life-interests are involved the problem of valuation is less difficult. For some sorts of property, indeed, it is easy. Thus in respect of capital possessions, the titles to which are held in the form of securities, a simple return could be required, and it could be checked to some extent by the information already in the hands of inspectors of taxes. For securities for which there is a wide market values could then be satisfactorily determined by reference to the prices that had ruled in the market over some assigned period. For securities that are not often dealt in it would be more difficult to make a fair valuation. For property not represented by securities there would have to be an appraisal by government valuers. Private businesses, houses, furniture, jewellery, works of art and other such things would all, so far as it was decided to include them under the levy, need to be treated in this way. It would be impossible to carry through such a general appraisal quickly, and it could hardly fail to prove both irritating and expensive. The difficulties, however, are not insuperable. (At least three alternative ways of dealing with them are available. First, all persons *prima facie* liable to levy might be required to send in a valuation of their properties by some assigned date. On this valuation they might be assessed in the first instance. Thereafter, government appraisers might set to work and gradually, during the course of several years, might go through these private valuations and, where necessary, correct them. After the proper valuation had been finally determined, any adjustment required on account of the corrections might be effected by payments from the tax-payer to the Exchequer, or *vice versa*. Secondly, the levy might be assessed in the first instance on the basis of those kinds of property only, the valuation of which presents no difficulty. Such things as furniture, jewellery and works of art might be left over till each several property came up for valuation in the natural course at the owner's death. Then the ordinary death duty assessment might be supplemented by a further assessment in respect of postponed special levy upon these things.) The disadvantage of this method is, of course, that

it makes difficult the proper graduation of the levy. The rate of levy should vary with the aggregate size of different properties. If only a part of these properties is brought under review when the main levy is assessed, this cannot be done. Any error that results might, however, be corrected by manipulating the rates at which the supplementary levy is assessed later on. (Thirdly, elements of property which are exceptionally intractable to valuation might be left out of assessment altogether, on the ground that, though this would, undoubtedly, be unfair, yet a certain amount of unfairness must, as in all tax matters, be endured in order to avoid administrative complications. Clearly, no one of these devices is wholly satisfactory, and this fact is, so far, an argument against the imposition of a special levy based on capital.)

√§ 15. A special levy based, not on capital, but on current and recent income as the object of assessment would be free from these valuation difficulties; for all that the taxing authority would need to know is already filed in connection with ordinary income tax. Considerations of equity, however, practically rule out of account a special levy assessed in a merely mechanical way upon incomes. It would be essential to arrange for the imposition of different rates upon (given amounts of) different kinds of income, and this would involve complicated inquiries into the nature of the sources from which incomes arose. These might well bulk so large that this apparently simple form of special levy would in practice prove extremely complex.

√§ 16. It is not necessary to say much in general summary of this long discussion. During the period immediately following the war I personally was of opinion that, if it had been possible to pass with general assent, or with such measure of assent as was accorded to the Excess Profits Duty, an Act providing for a levy adequate to wipe out a substantial portion of the war debt, this would, on the whole, have been to the national advantage. At the present time, or as regards the near future, I do not advocate such an Act, for the following reasons. First, if it was passed, its execution would be impeded by strong and organised opposi-

tion, perhaps backed by some of the banks, and, in view of the great technical difficulties to be overcome in any event, it could not successfully surmount this. Secondly, such an Act, passed belatedly a number of years after the return of peace, would make people much more fearful of further levies to follow the first than it would have done if passed in intimate connection with the ending of the war. Thirdly, whereas in the boom that followed the war prices stood at a level from which it was highly probable there would be—as in fact there has been—a large recession, so that to refrain from repayment of internal debt then meant allowing its real value, and so the rates of tax required to provide for its service, to increase very greatly, at the present time there is no strong reason to expect a heavy fall in prices in the near future.¹ Lastly, British industry is still in an abnormally depressed condition, and in these circumstances anything which might render business men nervous, even if the nervousness would be, in the main, unreasonable, is to be deprecated.

¹ Cf. *ante*, § 7.

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